USGS
science for a changing world

Earthquakes ★ Floods ★ Hurricanes ★ Landslides ★ Tsunamis ★ Volcanoes ★ Wildfires

FY 2005
Performance and Accountability Report

U.S. Department of the Interior
U.S. Geological Survey

On the Cover

The cover illustrates natural hazards and the complex role the USGS has in addressing natural hazards. More Americans are at risk of being severely impacted by natural hazards now than at any other time in our Nation's history. In the United States each year, natural hazards cause hundreds of deaths and cost tens of billions of dollars in disaster aid, disruption of commerce, and destruction of homes and critical infrastructure. Recent advances in science and technology position us well for making significant progress in reducing America's risk to natural hazards. USGS is able to bring a unique combination of disciplines—biology, geology, hydrology, geography, and geospatial information technology—to bear on all hazards. We are embarking on an ambitious focus to turn our scientific ability in the hazards arena into operational ability. To be successful in reducing America's risk to natural hazards, we will utilize the active support and participation of the entire Bureau, regardless of discipline, region, or position.

Performance and Accountability Report

Limited copies of the FY2005 Performance and Accountability Report were printed in black and white. The FY2005 Performance and Accountability Report is available at: http://www.doi.gov/pfm/burrept.html.

How to Read This Report: From Mission to Measurement

The U.S. Geological Survey (USGS) FY2005 Performance and Accountability Report (PAR) will reach many people who have specific needs for the information it contains. We have designed our presentation to serve multiple audiences, with varied approaches, points of view, and levels of interest.

Our PAR contains an introduction, three sections, and appendices. Combined, these elements provide an accurate and thorough accounting of the USGS stewardship of critical resources and services to the American people.

The introduction contains a letter from our Acting Director highlighting our mission, accomplishments, reliability of financial and performance data, and Federal Manager's Financial Integrity Act (FMFIA) assurances, followed by a depiction of the Bureau at a glance.

Section I: Management Discussion and Analysis is a high-level overview of the USGS's performance in FY2005. It is designed for the public, legislators, officials from Federal, State, and Local governments, and other interested parties.

After a brief discussion of our mission and organizational structure, Section I summarizes our performance for the year by highlighting results of our most important performance measures and discusses our procedures to ensure their relevance and reliability, along with a description of difficulties experienced in measuring performance.

Section I also discusses our financial statements, including a discussion of our key financial related measures and stewardship information.

In addition, Section I presents USGS's compliance with legal and regulatory requirements, such as the Federal Managers' Financial Integrity Act (FMFIA), Federal Financial Management Improvement Act (FFMIA), and the President's Management Agenda.

Section I also shares some forward-looking information on the current and future challenges facing USGS, and discloses limitations to our financial statements.

Section II: Performance Data and Analysis presents an evaluation of our performance budget, the USGS's performance results in detail, and program evaluation and procedures undertaken to validate and verify our performance results.

This will be most useful to Congressional members and staff, program examiners with the Office of Management and Budget (OMB), analysts with the Office of the Inspector General (OIG), the Government Accountability Office (GAO), and interested citizens and customers.

Section III: Financial Information will interest anyone who is concerned with tracking the Bureau's financial performance.

This section contains an assessment of our consolidated financial statements by an independent certified public accounting firm. The objective of a financial statement audit is to determine whether the consolidated financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes an assessment of the accounting principles used and signficant estimates made by management, as well as an evaluation of the overall consolidated financial statement presentation.

Section III also presents consolidated financial statements, footnotes, required supplemental information, and required supplementary stewardship information.

The Appendices contain a list of acronyms and the description of a significant accomplishment in FY2005 by a USGS employee.

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Message from the Director

In Fiscal Year (FY) 2005 the United States and the World have faced many challenges associated with natural hazards which have resulted in large scale disasters with significant cost in terms of lives lost and economies disrupted.

Correspondingly, in FY2005 the U.S. Geological Survey (USGS) focused its energies on responding to these natural disasters by providing science with which to better assess the nature and scope of the hazard, operating real-time monitoring networks to provide current information on the hazards as they develop and change, and disseminating its scientific data to decision makers at the local and national levels. The overall purposes served by USGS Natural hazards science is to improve the understanding of risk and with this better understanding to enable more effective pre- as well as post-event planning, hazard mitigation and emergency response. This Performance and Accountability Report (PAR) highlights examples of USGS science that provide critical information with which to understand and more effectively respond to natural hazards.

The list of natural disasters to which the USGS mounted major responses during the past year includes:

- Renewed unrest at Mount St. Helens Volcano;
- Volcanic eruptions at Mt. Veniaminof in Alaska and Anatahan in the Northern Mariana Islands;
- Developing volcanic unrest at Kilauea in Hawaii and Mt. Spurr in Alaska;
- The major earthquake and resulting tsunami in the Indian Ocean;
- The end of the 2004 hurricane season involving repeated storms striking Florida;
- The 2005 hurricane season and the devastating storms that hit the U.S. Gulf Coast;
- Devastating landslides and debris flows in California in January associated with a period of heavy rain;
- Record flooding in several Midwestern States; and
- A particularly active wildland fire season that has burned more than eight million acres in 40 States.

The USGS has the lead Federal responsibility under the Disaster Relief Act (P.L. 93-288) to provide hazard warnings and notifications for earthquakes, volcanoes, and landslides to enhance public safety and to reduce losses through effective forecasts and warnings based on the best possible scientific information.

With respect to hurricanes, the USGS produces coastal change vulnerability products to provide pre-hurricane forecasts of impacts to infrastructure, essential for evacuation and post-storm recovery efforts. The USGS also documents storm surge and flooding effects of hurricanes and monitors the effect of these large storms on sensitive coastal ecosystems.

Flood watches and warnings, issued by the National Weather Service, require USGS real-time streamflow information. The USGS operates a nationwide network of some 6,000 stream gages which have the capability to monitor conditions and transmit observations in real or near real time. Federal, State, and local agencies also use real-time USGS streamflow data to prepare their own operational forecasts for flood-control reservoirs, river levees, and evacuation routes. Getting critical streamflow information to these decisionmakers requires modern hydrologic instruments, coupled with national computer and communications infrastructures, satellite telemetry, and a robust program to calibrate and maintain this network of instruments.

For earthquakes, while it is not yet possible to predict the precise time and location of damaging events, it is possible to predict their impacts and to deliver rapid post-event information to emergency responders. The USGS delivers long-term forecasts of earthquake shaking in the form of hazards maps that underlie most building codes used in the United States. In addition, within minutes after a domestic earthquake, the USGS and its regional partners issue alerts with location and magnitude of the event. In five urban areas where dense arrays of strong-motion instruments have been

deployed through the Advanced National Seismic System initiative, it is now possible to produce near real-time maps showing the geographic distribution of ground shaking for use in guiding emergency response efforts. Finally, in the time scale of hours to days following large earthquakes, the USGS provides short-term predictions of the likelihood of aftershocks, a capability that currently exists only in California but could be expanded nationwide.

For volcanic hazards USGS science has advanced to the state that, with appropriate monitoring, impending eruptions generally can be forecast and warnings issued in time for communities to prepare. The USGS and its partners operate extensive monitoring networks at 50 of the 169 volcanoes in the United States and its Territories considered active. Worthy of note is that the number of active volcanoes threatening the United States is larger than any other country in the world. A USGS National Volcano Early Warning System plan, which prioritizes monitoring and assessment at U.S. volcanoes, is under development. As unrest mounts, such as occurred in early FY2005 at Mt. St. Helens, the USGS deploys scientists and additional monitoring equipment to provide enhanced observation of changing conditions and to enable the timely issuance of hazard warnings to potentially impacted communities.

Wildland fires are a form of natural hazard that threatens all 50 States. The USGS supports Federal and State fire management agencies by providing timely fire danger information based on the condition of vegetation and associated metrics that characterize fire danger. The USGS uses satellite observations to produce vegetation condition and fire vulnerability assessments at regional and local scales. To aid wildland fire suppression, the USGS manages Internet sites and tools that permit fire managers to access online maps of current fire locations and perimeters. The USGS is also working with the National Interagency Fire Center to analyze satellite information to obtain updates of land cover vegetation to determine fire-weather conditions. The USGS is also involved in providing post-fire scientific assessments to assist land managers in determining erosion, landslide, and flood potential and to develop restoration and rehabilitation plans.

Prompt alerting of what is happening during and immediately following a natural disaster is critical. Regardless of the type of hazard, effective warnings require more than monitoring and notification technology. Their success depends on hazard research, up-to-date response plans being in place, and pre-event linkages among Federal, State, and local government agencies, non-governmental organizations, the private sector, and the media. Effective warnings require an integrated system involving information gathering, expert evaluation, generation of accurate warnings, and communication to an educated and informed audience prepared to take effective action.

Scientific and technological advances made in the USGS, universities, and the private sector in the past few decades present great opportunities for improvements in forecasts, warnings, and hazard assessments. There remains a need for modernization and expansion of real-time monitoring networks, robust satellite imagery and telemetry capabilities, hazard assessments to guide network designs, and robust and secure communications for dissemination of warnings and alerts. The USGS continues to work in this direction.

FY2005 was a year of extreme natural hazards. To prepare for such events and to reduce the public's risk, the USGS continues to improve hazard assessments, monitoring, warnings, and predictions that will allow people to take actions that save lives, protect property, reduce business disruption, and speed recovery and mitigation efforts.

Pat Leahy
Acting Director
October 2005

The Bureau at a Glance

History and Enabling Legislation

The USGS, a bureau within the Department of the Interior (Department), was created by an act in the final session of the 45th Congress in 1879 for the "classification of the public lands, and examination of the geological structure, mineral resources, and products of the national domain."

Mission

The USGS serves the Nation by providing reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.

Strategic Goals

Resource Protection:	Protect the Nation's natural, cultural, and heritage resources
Resource Use:	Manage resources to promote responsible use and sustain a dynamic economy
Serving Communitites:	Safeguard lives, property and assets, advance scientific knowledge, and improve the quality of life for communities we serve

Organization

Regions:	Eastern, Central, and Western
Scientific Disciplines:	Biology, Geology, Geography, and Water
Support Entities:	Geospatial Information, Facilities, and Science Support

Programs

- Biological Informatics
- Coastal and Marine Geology
- Contaminant Biology
- Cooperative Research Units - Biology
- Cooperative Topographic Mapping
- Cooperative Water
- Earth Surface Dynamics
- Earthquake Hazards
- Energy Resources
- Enterprise Information
- Facilities
- Fisheries: Aquatic and Endangered Resources
- Geographic Analysis and Monitoring
- Geomagnetism
- Global Seismic Network
- Ground Water Resources
- Hydrologic Networks and Analysis
- Hydrologic Research and Development
- Invasive Species
- Land Remote Sensing
- Landslide Hazards
- Mineral Resources
- National Cooperative Geologic Mapping
- National Streamflow Information
- National Water-Quality Assessment
- Priority Ecosystems Science
- Science Support
- Status and Trends of Biological Resources
- Terrestrial, Freshwater, and Marine Ecosystems
- Toxic Substances Hydrology
- Volcano Hazards
- Water Resources Research Act, and
- Wildlife: Terrestrial and Endangered Resources

Employees

USGS has scientists, technicians, and support staff in every State and several foreign countries with a total of approximately 9,200 employees.

Financial Resources

The Bureau's FY2005 budget, including transferred and supplemental appropriations, was $960 million.

Internet

The Bureau's Internet address is http://www.usgs.gov.

Section I
Management Discussion and Analysis

USGS Astrogeologist Jeff Plescia talks about the geologic history and features of Meteor Crater in Arizona, which is over 4,000 feet across, 550 feet deep, 2.4 miles in circumference, and was formed over 50,000 years ago. From 1964 through 1972, the USGS and NASA provided extensive science training at Meteor Crater for the Apollo astronauts. In recent years, work has been completed at Meteor Crater in the fields of terrestrial impact craters, cratering mechanics, plantetary studies, and astronaut training.

Contents

Who We Are and What We Do

The USGS serves the Nation as an independent fact-finding agency that collects and analyzes natural resource data and provides scientific understanding about conditions, issues, and problems. The USGS is the science provider of choice for information and understanding to help resolve complex natural resource problems across the Nation and around the world.

Vision

The USGS is a world leader in the natural sciences through our scientific excellence and responsiveness to society's needs.

Created by an act of Congress in 1879, the USGS celebrated its 125th anniversary last year. When the USGS was established, the Federal government held title to more than 1.2 billion acres of land, nearly all of it west of the Mississippi River, and only 200 million acres of this land had been surveyed. John Wesley Powell, who led one of the great western surveys that preceded the creation of the USGS and who later served as the second USGS Director, suggested that very little of the remaining public land was suitable for conventional farming and that only a small fraction of the arid land was irrigable using known resources. Powell proposed radical changes in the land system, including organization of irrigation and pasturage districts, to improve management of water and natural resources by sociopolitical institutions, based on natural science. One hundred and twenty-six years later, the USGS continues to provide the scientific foundation to ensure the best planning and the best decisionmaking.

Today, the USGS is sought out by thousands of partners and customers for its natural science expertise and its vast earth and biological data holdings, and is the only integrated natural resources research bureau in the Federal government. The value of USGS to the Nation rests on its ability to carry out studies on a national scale and to sustain long-term monitoring and assessment of natural resources. Because it has no regulatory or managerial mandate, the USGS provides impartial science that serves the needs of our changing world. Its diversity of scientific expertise enables the USGS to carry out large-scale, multi-disciplinary investigations that build the base of knowledge about the Earth. In turn, decisionmakers at all levels of government and citizens in all walks of life have information available to them for their needs to address pressing societal issues.

The thousands of scientists, technicians, and support staff of the USGS are located in nearly 400 offices in every State and in several foreign countries. With an annual budget of approximately $960 million, the USGS leverages its resources and expertise in partnership with more than 2,000 agencies of State, local, and Tribal governments; the academic community; other Federal agencies; non-governmental organizations; and the private sector. Field investigations, direct observations of natural science processes and phenomena, and monitoring and data collection are the scientific hallmarks of the USGS.

The USGS is proud of its outstanding history of public service and staying at the forefront of advances in understanding the Earth, its processes, and its resources. USGS scientists pioneered hydrologic techniques for gaging the discharge in rivers and streams and modeling the flow of complex ground-water systems. Innovative ventures with the private sector have given the world access to digital images of neighborhoods and communities in one of the

"This past year, we celebrated 125 years of science for America. Nationwide, our facilities opened their doors to our partners, customers, and the public to share our accomplishments and our excitement about the future. Although our longevity is worthy of praise, we should also celebrate the strength of our mission, which has endured because it serves society and the Earth's environments well. We must continue to build on that tradition while focusing new efforts on our unique role in natural hazards, to help reduce America's risk."

Dr. Chip Groat, Former USGS Director

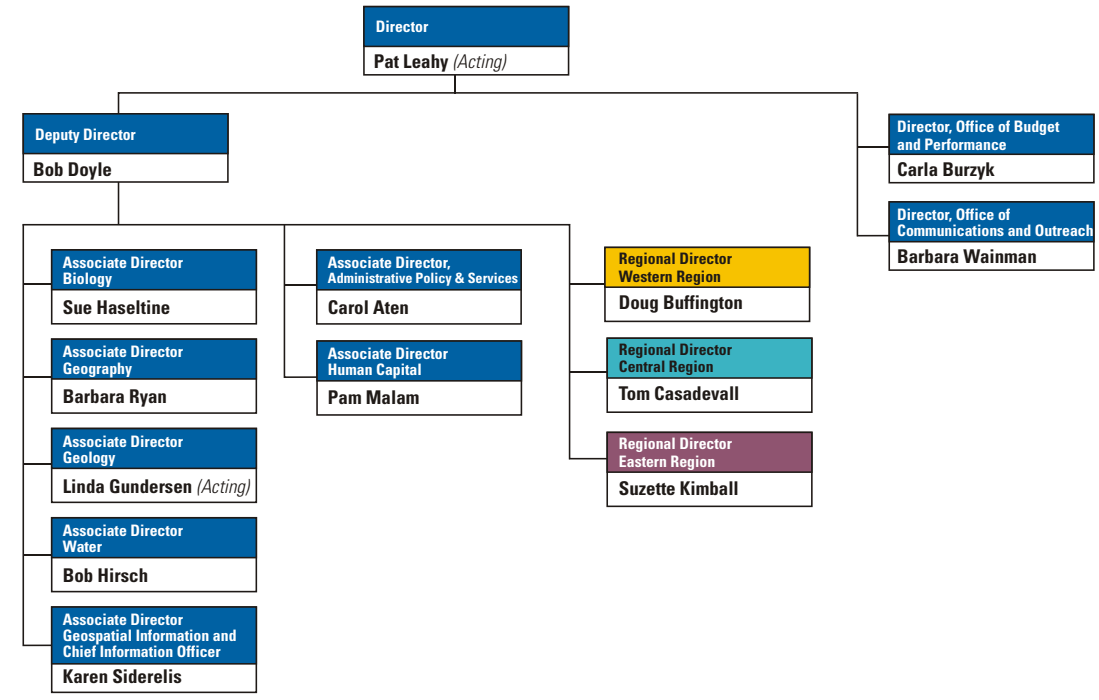
largest data sets ever made available online. Modern-day understanding of the formation and location of energy and mineral resource deposits is rooted in fundamental scientific breakthroughs by USGS scientists. USGS biologists revolutionized thinking about managing wildlife resources, providing a sound scientific basis for waterfowl conservation and recreational hunting to work in tandem as adaptive management, not as conflicting interests. Advances in seismology are making early warnings of earthquakes a reality that will give the needed alert time to save lives. The future of the global community presents unprecedented opportunities for the science of the USGS to continue to make substantive and life-enhancing contributions to the betterment of the Nation and the world.

The USGS addresses both national program priorities and local science needs on the landscape through a matrix-management approach. (See organizational chart below.) National programs are overseen by Associate Directors for each discipline and administered by Program Coordinators at Headquarters in Reston, Virginia. Regional Directors, Regional Executives, and Regional Science Coordinators are deployed across the Nation, bringing bureau leadership and programs closer to customers and their issues. Together, they ensure the quality of our science and its relevance to the needs of land and resource management decisionmakers. Together, they offer holistic science solutions by bringing to bear the expertise of scientists from multiple disciplines, integrating science to confront the complexity of a continually changing world. Together, USGS resources and science benefit not only the immediate needs of partners and customers but also the Nation as a whole through application of the results to similar issues across the country and into the future.

Strategic Direction

The USGS will combine and enhance our diverse programs, capabilities, and talents and increase customer involvement to strengthen our science leadership and contribution to the resolution of complex issues.

U.S. Geological Survey



September 2005

How We Are Organized

The USGS has major field centers for the three regions in Reston, Virginia (Eastern), Denver, Colorado (Central), and Menlo Park, California (Western). The USGS rents 4.3 million square feet of space in about 220 GSA buildings nationwide and owns 34 installations with 1.2 million square feet of space in 283 owned buildings. The USGS operations include:

- an earthquake monitoring network comprising a global seismographic network of 130 stations located worldwide with national and regional networks located throughout 35 states and territories and the National Earthquake Information Center in Golden, Colorado;
- 14 geomagnetic observatories;
- a landslide network and the National Landslide Information Center;
- a volcano hazards network and volcano observatories in five States to monitor 49 U.S. volcanoes;
- 17 biological science centers and associated field stations and a center for biological informatics;
- approximately 7,000 streamgages and water quality monitors, the National Water Quality Laboratory, and the Hydrologic Instrumentation Facility;
- production and distribution facilities that manage more than 55,000 topographic maps, 2.6 petabytes of cartographic and digital data stored at the EROS Data Center, archive aerial photographs, and 32 years of global satellite data;
- an average of 10,800,000 successful requests made to the USGS homepage every month, an average of 400,000 customer inquiries made to USGS libraries and Earth Science Information Centers annually, more than 25,000 scientific and technical publications previously available only in paper made electronically accessible, and an average of 19,000 SPAM and virus messages blocked daily by IT security operations; and
- affiliation with 40 Cooperative Research Units and 54 State Water Resources Research Institutes.

The eastern region is composed of 26 States, the District of Columbia, the Commonwealth of Puerto Rico, and the U.S. Virgin Islands and has approximately 2,750 employees distributed across duty stations throughout the region. USGS eastern region offices are located at 175 sites in the 26 States east of the Mississippi River, plus Puerto Rico and the Virgin Islands.

The central region is composed of 15 States between the Mississippi River and the western slope of the Rocky Mountains. Approximately 2,100 employees and 900 onsite contractors are distributed in 76 cities and 21 field offices across the central region.

The western region is composed of 9 western States, Guam, American Samoa, and the Commonwealth of the Mariana Islands. Approximately 2,300 employees are distributed in 33 cities and 64 field offices across the western region.

The Headquarters location in Reston, Virginia, is within the District of Columbia metropolitan area and has approximately 2,050 employees stationed in Reston and in several foreign countries.

The Focus of Our Science

The USGS vision, mission, and strategic direction focus on responsiveness and customer service, underscoring the application of science to customer, partner, and other stakeholder needs; directing the combined expertise of the bureau's scientific disciplines; and defining its commitment to pursuing an integrated approach to providing science for a changing world.

Information— about natural hazards, resources, and the environment— is the key to understanding the Earth. USGS science provides comprehensive, high-quality, and timely scientific information to decisionmakers and the public. The information holdings of the USGS offer an amazing gateway to rich data bases, manipulatable maps, newly acquired satellite images, real-time information, and a wealth of reports spanning more than a century of science. The growing global population lives in an information age that is becoming incredibly complex. Scientific information is increasingly essential to an ever-widening— and demanding— customer base.

To meet the critical science needs of the 21st Century, USGS is building on its traditional strengths while becoming more flexible and responsive. USGS is working to integrate its scientific disciplines while building on its world leadership and scientific excellence; to streamline operations to become as efficient as possible; to use the rapid advances in information technology to better deliver information to support the needs of decisionmakers; and to do a better job of understanding our many customers and partners.

The Focus of Our Strategic Plan

USGS long-term goals for meeting the challenges of the 21st Century are included in the Department-wide strategic plan and are supported by meaningful standards of performance. Measures for science and customer satisfaction build upon, and are supported by, internal goals and performance targets for employees and operations.

The following pages describe how our performance measures fit into the Department-wide strategic plan. First, a discussion of the Department GPRA goals that are applicable to USGS operations is described. Following that discussion, a table of end outcome goals correlated to the GPRA goals is included to illustrate those relationships. To demonstrate the integration of performance and financial information, our financial results— discussed later in the Management's Discussion and Analysis (MD&A)— are reported and directly correlated to the strategic plan GPRA goals and supporting end outcome goals. A high-level summary of performance results follows this discussion with a more comprehensive and detailed presentation of every performance goal and indicator in the performance budget following in Section II: Performance Data and Analysis.

GPRA Goals

A logic model was used to develop GPRA goals across the Department and create one Department-wide strategic plan implemented in FY2004 and continuing in FY2005. It provides the Department a set of consistent goals with a common agenda and the means to increase focus on performance results; helps to make managers more accountable; and creates a springboard for communication, collaboration, and coordination in the interest of conservation with interested citizens, organizations, and constituents on a shared future direction.

USGS activities in FY2005 and FY2004 focused on 3 of the DOI's GPRA goals and 6 of the DOI's 17 end outcome goals, which support DOI's GPRA goals. USGS activities in relation to the GPRA goals, and supporting end outcome goals, are described below.

Resource protection strategic goal

Protect the Nation's natural, cultural, and heritage resources. USGS biological studies assist in maintaining healthy ecosystems and natural resources so that these habitats can continue to provide food, energy, medicine, transportation, and recreation. The USGS will continue to serve the biological research needs of DOI bureaus and others by providing scientific information through research, inventory, and monitoring. Information generated by the Biological Research program contributes to achieving DOI bureau goals for improved management of the Nation's land and water resources and biological communities and improved decisionmaking regarding land and resource use.

Resource use strategic goal

Manage natural resources to promote responsible use and sustain a dynamic economy. USGS is the sole Federal provider of scientific information for objective resource assessments and unbiased research on mineral potential, oil, production, consumption, and environmental effects and is a primary Federal source for gas and alternative energy potential. The United States is the world's largest user of mineral commodities and depends on other countries for 100 percent of 17 mineral commodities and less than 50 percent of 42 commodities that are critical to the U.S. economy. USGS provides the information for decisions about resources and consequences of their development. Similarly, USGS conducts national and global energy resource assessments of oil, natural gas, coalbed natural gas, gas hydrates, and coal resources and evaluates the risks for environmental and ecological degradation associated with the production and use of energy resources. These investigations enable the Nation to make sound decisions regarding significant increases in domestic energy production with an understanding of potential impacts on the environment.

Serving communities strategic goal

Safeguard lives, property, and assets; advance scientific knowledge; and improve the quality of life for the communities we serve. The USGS hazards programs produce information and understanding that reduce the impact of natural hazards and disasters on human life and the economy. USGS analyses of the availability and quality of water resources help to develop, regulate, and monitor management practices to ensure the continued availability of water resources for human consumption, agriculture, business, recreation, and environmental stability. The USGS

geography program is expanding its partnerships with Federal agencies and State and local governments to develop and promote the use of geographic data and mapping products that are essential for economic and community development, land and natural resource management, and health and safety services. Collection, management, and delivery of scientific information to inform land and resource decisionmaking is a primary focus of this goal.

GPRA Performance Data Validation and Verification

In keeping with Departmental and OMB policy for performance data validation and verification (V&V), USGS complies with requirements for performance data credibility.

Our approach to achieving performance data credibility includes providing extensive Budget and Performance Integration and Activity Based Cost Management training, SES performance measures linked to appraisals, and implementation of the Department data V&V Assessment Matrix. During FY2005, USGS continued to include USGS-specific measures, outputs, Management Excellence, and all Program Assessment Rating Tool performance measures in the data V&V. This extends the assurance of credibility to more performance data, ensuring usability for management decisionmaking and oversight. A more detailed discussion of data V&V is in Section II: Performance Data and Analysis section.

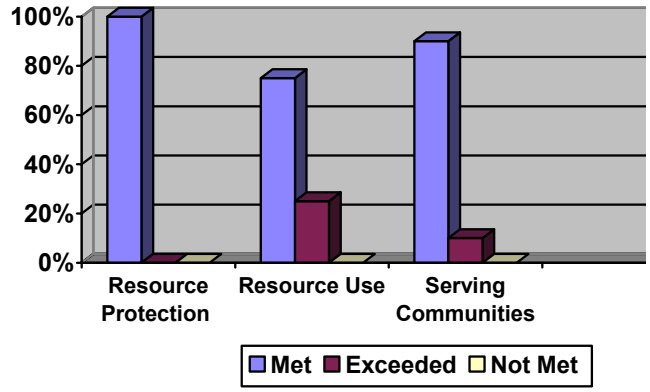
Performance Measurement Difficulties

Measuring performance is inherently difficult, and we have customized the methods of measurement to USGS in order to make the results meaningful. Any performance data limitations are documented in the following pages and no corrective actions are needed.

How We Performed in FY2005

USGS met or exceeded 100 percent of the 20 key DOI performance measures monitored during FY2005. Results for these key measures are presented below, following a summary description of each strategic goal and the percentage of relevant key performance measures met or exceeded. For a full report of the USGS performance measures, see Section II: Performance Data and Analysis.

Results of Key Performance Measures



Many of USGS performance measures were new in FY2004, developed in conjunction with the Department's Strategic Plan. Consequently, historical data to support targeting is not available for those measures. FY2004 results became a point from which USGS begins to show performance trends over a longer term, while identifying the factors that impact mission performance.

Strategic Goal of Resource Protection:
Protect the Nation's Natural, Cultural, and Heritage Resources

DOI is the Nation's principal conservation agency, conserving Federally managed lands and waters, protecting fish and wildlife, and preserving public lands for future generations to enjoy. Science is key to making decisions on how to best conserve the Nation's natural resources. USGS plays an important role in accomplishing DOI's mission to administer programs on thousands of upland, wetland, and aquatic parcels, and protecting native plant and animal species.

End Outcome Goal: Improve the health of watersheds, landscapes, and marine resources that are DOI-managed or -influenced in a manner consistent with obligations regarding the allocation and use of water.

USGS met or exceeded 100 percent of the three key performance measures monitored during FY2005 related to this end outcome goal.

End Outcome Goal: Sustain biological communities on DOI-managed and -influenced lands and waters in a manner consistent with obligations regarding the allocation and use of water.

USGS met or exceeded 100 percent of the three key performance measures monitored during FY2005 related to this end outcome goal.

Strategic Goal of Resource Use:
Manage Resources to Promote Responsible Use and Sustain a Dynamic Economy

Managing the vast resources of America's public lands has been a core DOI responsibility since the Department was founded in 1849. Lands and water managed by DOI produce resources critical to the Nation's economic health. Science is a key foundation upon which DOI bases management decisions that promote natural resource use to sustain a dynamic economy while maintaining healthy lands and waters. USGS plays an important role in accomplishing DOI's mission to administer programs providing information on millions of square miles of land across all of the United States.

End Outcome Goal: Energy – Manage or influence resource use to enhance public benefit, promote responsible use, and ensure optimal value.

USGS met or exceeded 100 percent of the two key performance measures monitored during FY2005 related to this end outcome goal.

End Outcome Goal: Non-Energy minerals – Manage or influence resource use to enhance public benefit, promote responsible use, and ensure optimal value.

USGS met or exceeded 100 percent of the two key performance measures monitored during FY2005 related to this end outcome goal.

Strategic Goal of Serving Communities:
Safeguard Lives, Property, and Assets; Advance Scientific Knowledge; and Improve the Quality of Life for the Communities We Serve

DOI's responsibility to serve communities extends well beyond the lands and resources it manages. Interior is responsible for protecting lives, resources, and property, and providing scientific information for better decisionmaking. Science is the heart of performing these tasks. USGS plays a critical role in accomplishing DOI's mission to protect communities by providing scientific information to reduce risks from earthquakes, landslides, and volcanic eruptions; on the quality and quantity of the Nation's water resources; on geospatial and natural resource data; and in understanding the Earth.

End Outcome Goal: Protect lives, resources, and property.

USGS met or exceeded 100 percent of the four key performance measures monitored during FY2005 related to this end outcome goal.

End Outcome Goal: Advance knowledge through scientific leadership and inform decisions through the applications of science.

USGS met or exceeded 100 percent of the six key performance measures monitored during FY2005 related to this end outcome goal.

Response to Severe Rain Storms in Southern California

The Landslide Hazard Program (LHP) mounted a major response to the severe rainstorms in southern California that caused fatalities and extensive damage from landslides during the winter of 2005. Scientists from LHP issued landslide hazard advisories to State agencies in California and Federal agencies such as the National Weather Service (NWS), DOI bureaus, and the Department of Homeland Security, as well as issuing notification to the public through the NWS and news releases. The National Landslide Information Center in Golden, CO, operated around the clock to answer public officials, the public, and media inquiries.

Small, shallow landslides from March 2005 in older landslide scars from previous years, east of I-5 in Orange County.

LHP also conducted ground and air reconnaissance of the locations that experienced major landslides and served as technical advisor at the Federal Emergency Management Agency's (FEMA) California Disaster Field Office for 2 months. The FEMA official in charge of the "Infrastructure Branch" at the disaster field office thanked the USGS scientists for their support, stating in a May 10, 2005, letter: "They have assisted us with addressing one of the more complex and controversial issues we face in providing assistance to the affected communities. FEMA greatly appreciates their efforts." This accomplishment relates to the End Outcome Measure "Percentage of communities using DOI science on hazard mitigation."

On January 10, 2005, a landslide struck the community of La Conchita in Ventura County, California, destroying or seriously damaging 36 houses and killing 10 people.

March 2005 shallow landslides above the Pacific Coast Highway east of Mailbu.

Photos by Jonathan Godt and Mark Reid, USGS, LHP.

Resource Protection Key Performance Measures

End Outcome Goal:

Improve the health of watersheds, landscapes, and marine resources that are DOI-managed or -influenced in a manner consistent with obligations regarding the allocation and use of water.

Performance	Results				
Restore Fire Adapted Ecosystems: Percentage satisfaction with scientific and technical products (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	97%	100%	≥ 80%	100%
Forge Effective Partnerships: Satisfaction score (number score) on resource protection partnerships (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	97%	97%	≥ 80%	94%
Quality: Percentage of watershed and landscape-related research studies validated through appropriate peer review or independent review (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	100%	100%	100%	100%

End Outcome Goal:

Sustain biological communities on DOI-managed and -influenced lands and waters in a manner consistent with obligations regarding the allocation and use of water.

Performance	Results				
Forge Effective Partnerships: Satisfaction score (number score) on resource protection partnerships (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	97%	98%	≥ 80%	100%
Quality: Percentage of biological research studies validated through appropriate peer review or independent review (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	100%	100%	100%	100%
Facilities Condition: Conservation and biological research facilities are in fair to good condition as measured by the Facilities Condition Index (lower FCI is good) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	.19	.19	.19

Resource Use Key Performance Measures

End Outcome Goal:

Energy – Manage or influence resource use to enhance public benefit, promote responsible use, and ensure optimal value.

Performance	Results				
Baseline Information: Number of targeted basins with oil and gas resource assessments available to support management decisions (DOI strategic plan key measure and PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	7	5	6	7
Quality and Utility of Information: Percentage of studies validated through appropriate peer review or independent review (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	100%	100%	100%	100%

End Outcome Goal:

Non-energy minerals – Manage or influence resource use to enhance public benefit, promote responsible use, and ensure optimal value.

Performance	Results				
Baseline Information: Average square miles of the United States with non-energy mineral information available to support management decisions (DOI strategic plan key measure and PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	2,368,794	2,401,329	2,987,340	3,097,647
Quality & Utility of Information: Percentage of studies validated through appropriate peer review or independent review (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	100%	100%	100%	100%

Serving Communities Key Performance Measures

End Outcome Goal:

Protect lives, resources, and property.

Performance	Results				
Hazards: Percentage of communities using DOI science on hazard mitigation, preparedness, and avoidance for each hazard-management activity (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	39.5%	43.2%	45.9%	44.6%

Performance	Results				
Decision Maker Satisfaction: Met need for information to help achieve goal of reduced risk (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	97%	98%	98%	≥ 80%	99%
Facilities Condition: Buildings (administrative, employee housing) are in fair-to-good condition as measured by the Facilities Condition Index (FCI) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	.20	.20	.20
Adequacy: Percentage of sampled stakeholders reporting adequacy of science base to inform decisionmaking for each hazard-management activity (volcanoes, earthquakes, etc.) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	97%	98%	≥ 80%	99%

End Outcome Goal:

Advance knowledge through scientific leadership and inform decisions through the applications of science.

Performance	Results				
Research: Soundness of methodology, accuracy, and reliability of science (program evaluation) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	100%	80%	100%	100%
Inform decisions through the application of science: Improved access to needed science information (number score) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	80%	92%	90%	90%	92%
Inform decisions through the application of science: Stakeholders reporting that information helped achieve goal (number score) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	80%	94%	93%	90%	95%
Content and expanse of knowledge base: Percentage of land with temporal and spatial monitoring, research, and assessment/data coverage to meet land-use planning and monitoring requirements	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	54.76%	59.76%	58.9%
Quality: Percentage of studies validated through appropriate peer review or independent review (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	100%	100%	100%	100%
Facilities Condition: Facilities are in fair-to-good condition as measured by the Facilities Condition Index (FCI) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	.17	.17	.17

The USGS principal financial statements, which are included in Section III of this report, are prepared in accordance with accounting principles generally accepted in the United States of America as set forth for Federal entities, guidance issued by the Office of Management and Budget (OMB) and the DOI. While the financial statements have been prepared from the USGS books and records in accordance with the formats prescribed by OMB, they are different from the financial reports used to monitor and control budgetary resources that are prepared from the same books and records. The financial statements should be read with the realization that they are a component of the U.S. Government, a sovereign entity.

The DOI Office of the Inspector General (OIG) is responsible for auditing the basic financial statements of USGS and has satisfied their responsibility by contracting these services to KPMG LLP.

This analysis of the financial statements contains highlights on selected aspects of the accompanying principal financial statements.

Assets – What We Own

The Fund Balance with Treasury (FBWT) of $240 million represents 45 percent of total assets at September 30, 2005. The FBWT amount is primarily composed of appropriated funds available to make authorized expenditures, and remained consistent from FY2004 to FY2005 based on overall operations being generally consistent with the prior year.

The total net Accounts Receivable (A/R) of $133.9 million at September 20, 2005 is represented by 43 percent of amounts owed from other Federal agencies and 57 percent owed from the public. The majority of the accounts receivable is established to cover the direct and indirect costs for reimbursable services

(In Thousands)	% Change	2005	2004
Condensed Financial Statement Data:			
Fund balance with Treasury	+2%	$ 240,082	$ 234,783
Accounts and interest receivable, net	-6%	133,976	141,860
Property, plant, and equipment, net	-15%	162,170	190,769
Other	-5%	3,367	6,362
Total Assets	-6%	$ 539,595	$ 573,774
Accounts payable	-20%	$ 74,480	$ 92,596
Employee related liabilities	+5%	142,453	135,182
Other	-1%	56,687	56,945
Total Liabilities	-4%	$ 273,620	$ 284,723
Total Net Position	-8%	$ 265,975	$ 289,051
Total appropriations received - SBR	+1%	$ 960,374	$ 951,381
Total cost	-1%	$ 1,442,661	$ 1,457,218
Total revenue	-1%	405,921	407,643
Total net cost of operations	-1%	$ 1,036,740	$ 1,049,575

performed in support of surveys, investigations, and scientific research.

The majority of the receivable balance is unbilled: over 99 percent of the $58 million in receivables from Federal agencies are unbilled, while 68 percent of the $75.9 million in receivables from the public are unbilled. The large unbilled balance is due to the manner in which agreements are written for survey and research type work. The revenue for many agreements is recognized as work is completed, but the receipt of payment is often not due until completion of a survey or research report is accomplished. The balance of unbilled A/R remained consistent in FY2005 due to overall operations being generally consistent with the prior year.

The general property, plant, and equipment (PP&E), net of accumulated depreciation, amounted to $162.1 million at September 30, 2005. This amount includes a satellite reported on the Consolidated Balance Sheet at a net book value of $25.1 million, as well as land, buildings and improvements, furniture and equipment, and software purchased for internal use. Overall PP&E decreased from FY2004 to FY2005 due to current year depreciation expense, combined with a volume of new purchases that were significantly offset by disposals incurred during the current fiscal year.

Liabilities – What We Owe

The USGS is a scientific service organization where the majority of its liabilities are payroll and benefits related. The accrued payroll and benefits amount of $142.4 million, including Federal Employees Compensation Act (FECA) liabilities and annual leave due to employees, represents 52 percent of USGS total liabilities of $273.6 million at September 30, 2005.

Accounts payable of $74.5 million consists of 10 percent due to other Federal agencies and 90 percent due to the public. The balance of accounts payable decreased in FY2005 from the FY2004 balance in part due to USGS placing greater emphasis on making EFT payments to vendors, instead of issuing checks through Treasury to vendors.

Deferred revenue, credits, and the deposit fund liability of $12.8 million consists primarily of amounts advanced to the bureau to cover reimbursable services to be provided at a future date.

Unfunded liabilities represented a significant portion of the total outstanding liabilities in both FY2004 and FY2005. The largest liabilities in this balance consists of $59.7 million of unfunded annual leave and $48.3 million for both of the FECA liabilities. The other unfunded liabilities include the GSA Tenant Improvement liability of $19 million; contingent liabilities of $2.2 million; and environmental cleanup liabilities of $82 thousand.

Budgetary Resources – What We Receive

The USGS received approximately 62.4 percent, or $960.3 million, of its total budgetary resources of $1.5 billion through appropriations received in FY2005. The approved budget for the USGS was relatively flat compared with FY2004, which presented challenges to cover the cost of living and step increases in labor that the bureau experienced during FY2005. Other major sources of budgetary resources include unobligated balances carried over from FY2004 and spending authority from offsetting collections, totaling $120.3 million and $464.1 million, respectively. As of September 30, 2005, $1.4 billion of budgetary resources have been obligated.

The majority of the budgetary resources were used during the current year to support surveys, investigations, and scientific research. The following restrictions applied to the FY2005 appropriations received: $63.3 million in funds available only for cooperation with States or municipalities for water resource investigations; $7.9 million to remain available until expended for satellite operations; $22 million for operation and maintenance of facilities and deferred maintenance and shall be available until September 30, 2006; $1.6 million to remain available until expended for deferred maintenance and capital improvement projects that exceed $100,000 in cost; and $174.2 million for biological research activity and the operation of Cooperative Research Units until September 30, 2006.

The offsetting collections from the bureau's reimbursable programs include the following: reimbursements from non-Federal sources are from States, Tribes, and municipalities for cooperative efforts and proceeds from sale to the public of copies of photographs and records; proceeds from sale of personal property; reimbursements for permits and licenses of the Federal Energy Regulatory Commission; and reimbursements from foreign countries and

international organizations for technical assistance. Reimbursements from other Federal agencies are for mission-related work performed at the request of the financing agency.

The USGS also maintains a Working Capital Fund (WCF), established November 5, 1990, that is primarily used to invest funds from appropriations and reimbursable agreements, without fiscal year limitation, to purchase materials, supplies, and equipment for long-term capital investments. The WCF also provides fee-for-service operations internally and allows the USGS to provide more efficient financial management of its telecommunications investments; acquisition, replacement, and enhancement of scientific equipment; facilities and laboratory operations, modernization, and equipment replacement; drilling and training services; and publications.

Appropriations represent the vast majority of the budgetary financing sources of the bureau. Other financing sources are comprised of $3.7 million of transfers-in without reimbursement from other Federal agencies, $4.3 million in donations, and $62.8 million in imputed financing from costs absorbed by others, which represents costs paid by the Office of Personnel Management for USGS retirement, health, and insurance benefits of USGS employees and Treasury's Judgment Fund on the behalf of USGS.

Net Costs – What We Spend

In FY2005 and FY2004, net cost of operations totaled approximately $1,037 million and $1,050 million, respectively.

Consistent with the prior year, our major GPRA end outcome goals were:

- Improve health of watersheds and landscapes,
- Sustain biological communities,
- Manage or influence resources— energy,
- Manage or influence resources— non-energy,
- Protect lives, resources, and property, and
- Advance knowledge through scientific leadership.

As mentioned in the previous budgetary resources discussion, the USGS budget was relatively flat from FY2004 to FY2005. Although the USGS instituted many changes in specific programs and operations at the cost center level during FY2005, there were generally no significant changes experienced in overall operations at the bureau level. As such, the costs presented on the FY2005 Statement of Net Cost per GPRA segment are generally consistent with the prior year amounts.

Key Financial Metrics – What We Measure

Delinquent Debt Referred to Treasury over 180 Days Past Due

The Debt Collection Improvement Act of 1996 requires that delinquencies older than 180 days be referred to the Department of the Treasury's Financial Management Service (FMS), which was established as the Federal government's debt collection center. The USGS reports the status of receivables on quarterly Treasury Report on Receivables (TROR) reports. As of September 30, 2005, USGS reported on the TROR that $649 thousand, or 100 percent, in delinquencies over 180 days past due had been referred to FMS for cross servicing. In FY2005, USGS again surpassed the DOI's performance goal of referring 95 percent of the total amount eligible for referral to Treasury.

USGS billed accounts receivable due from the public decreased from $27.2 million in FY2004 to $25.7 million in FY2005. Delinquent amounts from the public over 180 days past due decreased from $889 thousand in FY2004 to $649 thousand at the end of FY2005.

Employee Bankcard Use and Delinquencies over 60 Days Past Due

The use of government issued bankcards for official employee travel has been required for several years within the USGS. Emphasis has also been placed internally on paying the balance due in full by the due date established on the bankcard statements, as well as requiring supervisors to closely review and approve bankcard statements for their employees.

The DOI set a performance goal of maintaining no more than 1 percent of the total balance due past 60 days old. USGS averaged about 1.5 percent of 60 days past due throughout FY2005. In an effort to improve our average, USGS converted to a centrally billed processing procedure during FY2005 that requires hotels to be paid directly by the bankcard issuer, instead of reimbursing the employees and allowing them to repay the bankcard. We expect to see an improved delinquency rate in FY2006.

Vendor Payments Made On Time

The Prompt Payment Act requires interest to be paid on invoices that are not paid on time in accordance with the Act. USGS strived to pay vendors on-time and to avoid paying late payment interest penalties throughout FY2005. DOI established a performance goal for bureaus to maintain 97 percent of the number of payments not requiring interest over the total number of payments subject to the Prompt Payment Act. USGS again exceeded the DOI's performance goal by paying 98.7 percent of vendor invoices on-time and without penalty. In addition, the late payment interest penalties decreased from $19,759 in FY2004 to $18,392 in FY2005. USGS will continue to monitor payment performance to ensure our timely vendor payment percentage stays on target.

Vendor Payments Made Via Electronic Funds Transfer (EFT)

During FY2005, USGS continued its efforts to maximize the use of payment mechanisms compliant with EFT as required by the Debt Collection Improvement Act of 1996. The DOI established a performance goal to maintain over 90 percent of the number of vendor payments paid via electronic means over the total vendor payments made.

During FY2005, the USGS exceeded the DOI's performance goal by maintaining 94 percent of payments made via EFT for vendor payments.

Other Bureau Performance Metrics

During FY2005, USGS continued to closely evaluate the financial operations of the bureau through sampling and other tests of compliance and performance.

The results of internal performance metrics are distributed bureau-wide and have helped to maintain high quality processing of bureau transactions.

Stewardship Information

The USGS serves American citizens as a steward for a large, varied, and scientifically important body of heritage assets, and in conducting research and development that is critical to the health of our country and in understanding the Earth. Each year the USGS makes a substantial investment while fulfilling its stewardship responsibilities for the benefit of the Nation.

USGS has heritage assets in two categories: museum collections and scientific library collections. The museum collection includes a widespread collection of natural history specimens and cultural objects in many science and administrative centers throughout the United States. USGS library holdings, collected during more than a century of providing library services, are an invaluable legacy to the Nation.

Costs associated with stewardship initiatives are treated as expenses in the financial statements in the year the costs are incurred. However, these investments in stewardship are intended to provide long-term benefits to the public and are included as required supplementary stewardship information reporting to highlight their long-term-benefit nature and to demonstrate our accountability over them. Stewardship resources are not required to be included in the assets reported in our financial statements; they are, however, important to understanding the operations and financial condition of USGS.

See the Required Supplemental Stewardship Information portion of Section III: Financial Section for complete disclosures regarding stewardship information.

Improper Payments Act

The Improper Payments Information Act of 2002 (P.L. 107-300) requires Federal agencies to carry out a cost-effective program for identifying payment errors and recovering any amounts overpaid. An improper payment includes any payment that should not have been made, or that was made in an incorrect amount under statutory, contractual, administrative, or other legally applicable requirement. Incorrect amounts include: overpayments; underpayments (including inappropriate denials of payment or service); any payment made to an ineligible recipient or for an ineligible service; duplicate payments; payments for services not received; and payments that do not account for credit for applicable discounts.

USGS reviewed all programs to determine the risk susceptibility of making improper payments and to perform more in depth assessments for those programs meeting OMB's criteria for significant erroneous payments. We concluded the our programs have a low risk for making improper payments.

Management Assurances:

The Federal Managers' Financial Integrity Act of 1982 (FMFIA) and the OMB require all cabinet-level Federal agencies to annually review their management control system. The objectives of DOI's management control system are to provide reasonable assurance that:

- The Department's obligations and costs are in compliance with applicable laws;
- The Department's assets are safeguarded against waste, loss, unauthorized use, or misappropriation;
- The revenues and expenditures applicable to agency operations are properly recorded and accounted for to permit the preparation of reliable financial reports and to maintain accountability over assets;
- All programs are efficiently and effectively carried out in accordance with applicable laws and management policy.

The efficiency of the DOI's operations are continually evaluated using information obtained from reviews conducted by GAO, OIG, bureau reviews, and/or specifically requested studies. On a yearly basis, DOI requires all of its bureaus to conduct self-assessments of their FMFIA compliance. These diverse reviews provide a high level of assurance that Department systems and management controls comply with standards established by the FMFIA.

In support of the annually required DOI bureau reviews, the associate directors of Biology, Geology, Geography and Water; the regional directors of Eastern, Central, and Western Region; the Chief of Administrative Policy and Services; and the Chief Information Officer provided signed assurance statements to the Director that their areas of responsibility had assessed the systems of management, administration, and financial controls in accordance with standards, objectives, and guidelines prescribed by the FMFIA and the OMB Circular A-123, *Management's Responsiblity for Internal Control*.

The objectives of the assessments ensured that:

- programs achieved their intended results;
- resources were used consistent with the bureau's mission;
- resources were protected from fraud, waste and mismanagement;
- laws and regulations were followed; and
- reliable and timely information was maintained, reported, and used for decision making.

In performing this assessment, USGS relied on the knowledge and experience gained from the daily operations of the programs and systems of accounting and administrative controls, and information obtained from sources such as management control assessments; OIG and GAO audits; program evaluations and studies; independent audits of financial statements; performance plans and reports; and other information.

FFMIA Assurance Statement

Based on the results of the USGS FY2005 assessment, I conclude the USGS systems of management, administrative, and financial controls provide reasonable assurance the objectives of the Federal Financial Management Improvement Act (FFMIA) have been achieved. I also conclude, based on the USGS FY2005 Information Technology security self assessments and other relevant information, USGS information systems provide reasonable assurance the objectives of OMB Circular A-130, *Management of Federal Information Resources*, have been achieved. Further, based on the results of the annual audit of the USGS financial statements by KPMG LLP, I conclude the USGS substantially complies with the FFMIA.

Pat Leahy
Acting Director, USGS

Each assurance statement provided documentation on specific management control assessments conducted and audits and/or reviews conducted by the OIG and/or GAO. The Acting USGS Director relied on this extensive documentation to support the bureau assurance statement on financial reporting to the Department on June 30, 2005, and for the overall assurance statement provided to the Department on September 15, 2005 (see Section II: Performance Data and Analysis for additional information on the program evaluation).

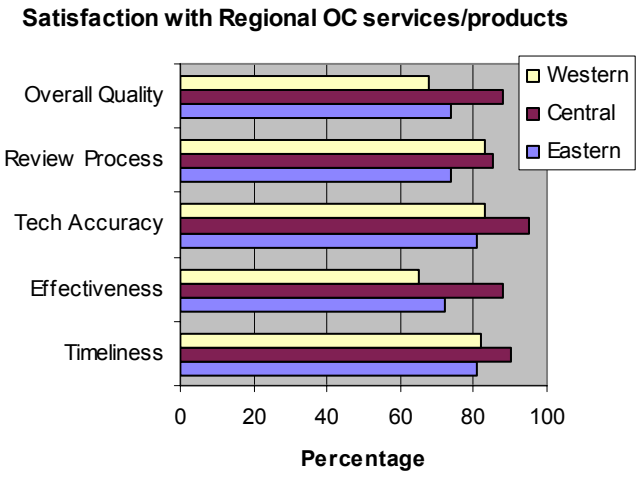
FY2005 Management Control Automated Surveys:

In addition to the department-wide, discipline, region, and office-specific reviews, automated management control surveys were sent to employees of 12 science centers (USGS Oklahoma Water Science Center, USGS Georgia Water Science Center, USGS South Dakota Water Science Center, Southwest Biological Science Center, USGS New York Water Science Center, USGS Alabama Water Science Center, USGS Connecticut Water Science Center, USGS New Jersey Water Science Center, National Wildlife Health Center, USGS Nevada Water Science Center, Forest and Rangelands Ecosystem Science Center, and Cascades Volcano Observatory), 2 offices (Office of Communications and Office of Budget and Performance), and 2 teams (Western Coastal and Marine Geology Team and Earth Surface Processes Team). The employees were asked to evaluate various aspects of management control at their center, office, or team.

Science-support offices and products were assessed using e-mail-administered employee opinion surveys. Standardized Management Control Surveys were conducted at 16 programs, science centers, and teams, more than doubling the 6 conducted in FY2004.

Customer Satisfaction Surveys

In support of strategic planning efforts, customers of the Office of Communications and the Southwest Biological Science Center (SBSC) were asked about their satisfaction with a variety of the Office/Center activities. For the Office of Communications, feedback was sought from a sample of 200 internal USGS customers. Responses were received from 86 percent. For the SBSC, feedback was sought from a sample of 100 external customers. Responses were received from 29 percent.



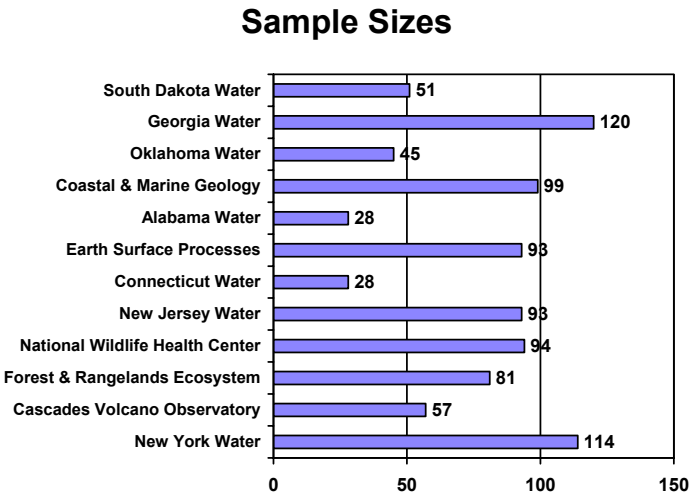
Management Control Survey Results

Computer Support Services Surveys:

The Office of Western Regional Support conducted a review of operations for the USGS Nevada Water Science Center. A sample of employees were asked about their satisfaction with various aspects of the computer support services they receive and their overall satisfaction with the quality of the service. In addition, they were asked how they learn about computer policy and procedures, if they are aware of various computer policies and support services, and if they have any suggestions for improving computer support services at the Nevada Water Science Center. A random sample of 50 of the Center's 163 employees received the survey. Responses were received from 76 percent of those surveyed.

Administrative Services Surveys:

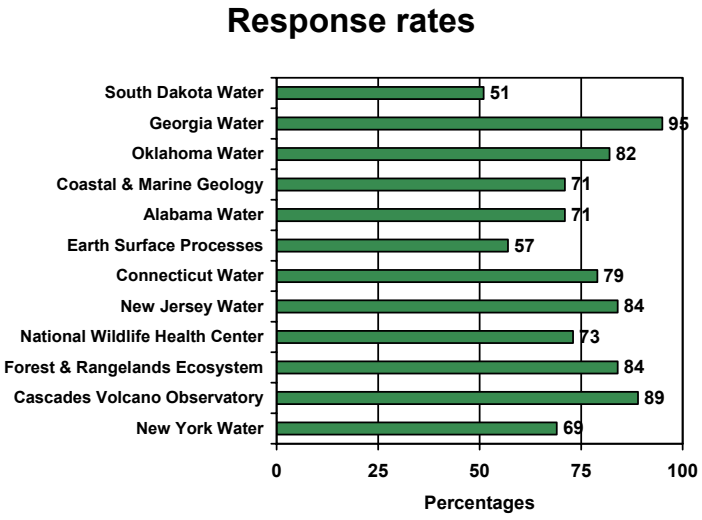
To gain input for administrative reviews, employees at 12 separate USGS science centers and teams were asked about their satisfaction with various aspects of the different administrative services they receive at their center/team and their overall satisfaction with the quality of the service. In addition, they were asked how they learn about administrative policy and procedures, if they use certain specific administrative services, and if they have any suggestions for improving administrative services at their center/team. The surveys were sent to all employees at the selected centers/teams, a total of 903 persons. Responses were received, on average, from 76 percent. Average reported satisfaction with the overall quality of administrative services was 91 percent.



Future Use of Management Control Survey Results

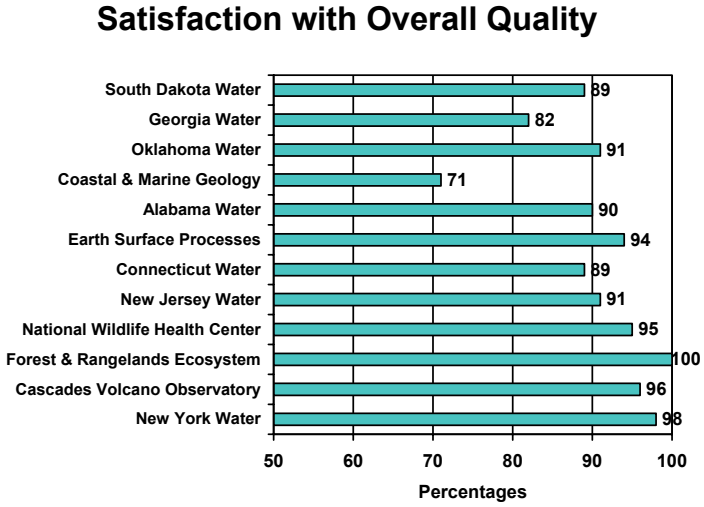
Office of the Director, Office of Communications:

The data, as well as the extensive comments, helped shape the Review Team recommendations on how to improve the effectiveness of the Bureau's communications and outreach activities. Areas of emphasis based on the survey results will include better delineation of and communication of roles and responsibilities between headquarters and regional communication staffs and improved feedback to the field on how their input and or data was used to increase the visibility of USGS science.



Forest and Rangeland Ecosystem Science Center:

The information will be used to help the Administrative Review Team prepare for the review by helping them develop a basic understanding of the services provided at the Center. A goal of the review is to increase communication and exchange of information between those involved with bureau/ regional/cost center administrative programs.



Nevada Water Science Center:

The results will be evaluated closely and used to assist in developing a cohesive and efficient Computer Support Team in the Henderson and Carson City offices.

Organizational Assessment Surveys

Broad scale employee assessments of working conditions and management practices were conducted at the National Wildlife Health Center and at the bureau-wide Office of Communications and Office of Budget and Performance. Employees were asked to state the degree to which they agree or disagree with a series of statements about their workplace. In addition, they were asked what they consider their office's greatest strengths and greatest weaknesses.

The surveys were sent to all employees at the center/offices, a total of 178 persons. Responses were received from an average of 92 percent.

The results of the surveys were used to identify perceived strengths and weaknesses in management practices and to target workplace improvements.

Office of Communications questions:

Widespread agreement was reported with all 13 statements. For example:

- I understand the mission/purpose of the Office of Communications (98%)
- My skills and talents are well used (86%)
- I have the opportunity to learn and grow (87%)
- Office of Communications employees work well with scientists in the field (98%)

Office of Budget and Performance questions:

Widespread agreement was reported with 16 of 17 statements. For example:

- I understand the mission/purpose of the Office of Budget and Performance (100%)
- I have the training and equipment to do my job (100%)
- My professional development is encouraged (96%)

Significantly lower agreement reported for:

- OBP management consistently shares information with the staff (66%)

National Wildlife Health Center questions:

Significantly higher agreement with these statements:

- I recommend the NWHC as a good place to work (96%)
- My work gives me a feeling of personal accomplishment (90%)
- I know how my work relates to the NWHC's missions and goals (99%)

Significantly lower agreement with these statements:

- I am encouraged to improve my skills and knowledge through relevant training opportunities (66%)
- The Regional Office and Biology HQ provide the NWHC the appropriate and necessary services and tools to support the science mission (32%)
- I understand the goals and objectives of the six Biology national program elements (52%)

Resolution of Internal Control Weaknesses and Non-Compliance with Laws and Regulations:

The following tables summarize actions taken to resolve material weaknesses, reportable conditions, and instances of noncompliance with laws and regulations reported in the Independent Auditors' Report on the USGS Financial Statements for FY2004.

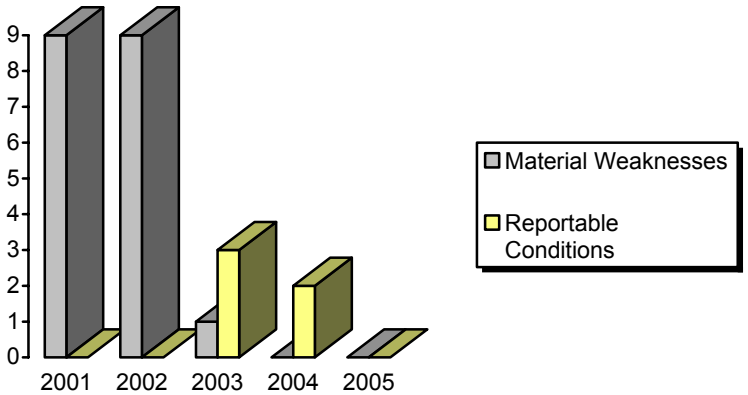
Reportable Condition	Corrective Action	Target Date	Implemented (Yes/No)
Controls over information technology (IT) data security	Completed corrective actions related to: 1. T&A Application – Designated an independent management official; implemented restrictions on the reuse of passwords; enforced segregation, or implemented alternate controls as appropriate. 2. Physical Access – Continued to ensure that all currently authorized personnel have legitimate business needs for physical access to the USGS data center; obtained and maintained proper authorization documentation; established a program to review physical access to sensitive areas. 3. User Account Management – Revised mainframe access review and approval in coordination with NBC; documented policies and procedures for restricting access to the Solaris system software. 4. Logical Access Control – Reviewed the vulnerability assessment results; ensured thorough, periodic reviews to identify vulnerabilities on the internal network. Status as of 9/30/05: USGS corrective actions were sufficiently effective for this FY2004 reportable condition to not be repeated by our auditors in FY2005.	9/30/05	Yes
Controls over accounts receivables and deferred revenues related to reimbursable agreements	Revised Instructional Memorandum for monthly reviews and quarterly certifications of accounts receivable balances to include exception reporting that identified abnormal balances and provide aging reports; conducted statistical sampling reviews of the reports and the certification and included results in financial performance indicators to cost center managers and regional directors; and automated billing process of Federal bills using PC billing. Status as of 9/30/05: USGS corrective actions were sufficiently effective for this FY2004 reportable condition to not be repeated by our auditors in FY2005.	9/30/05	Yes

Non-Compliance	Corrective Action	Target Date	Implemented (Yes/No)
FFMIA – Federal Financial Management Systems Requirements	Completed corrective actions described on prior page for the IT data security reportable condition. Status as of 9/30/05: USGS corrective actions were sufficiently effective for this FY2004 noncompliance condition to not be repeated by our auditors in FY2005.	9/30/05	Yes

Unqualified Opinions on Principal Financial Statements:

USGS is committed to strong financial management and has made much progress in this area in recent years. This achievement results from our commitment to strong management control and accountability over our financial resources, a commitment that we are extending into the future as we seek to further improve management of our financial resources. Significant progress was also made in quickly addressing internal control reportable conditions. In FY2001, all nine reportable conditions reported by KPMG LLP were considered to be material weaknesses. Though no opinion was issued in FY2002, most matters were still considered to be uncorrected at that fiscal year-end. In FY2003, all but one of the prior material weaknesses were corrected, while all but three others were downgraded to reportable conditions. In FY2004, USGS had two reportable conditions and no material weaknesses. In FY2005, USGS had no material weaknesses or reportable conditions. This progress illustrates our progression toward full attainment of unqualified audit opinions by correcting material weaknesses and maintaining that status through continuous improvement.

KPMG LLP's Opinions Issued to USGS	
FY2001	Disclaimer
FY2002	No Opinion
FY2003	Unqualified Balance Sheet
FY2004	Unqualified Financial Statements (all)
FY2005	Unqualified Financial Statements (all)



The President's Management Agenda (PMA):

In FY2005, USGS continued to improve in areas targeted in the PMA, which focuses on improving Federal management and program performance. Organized around the mutually reinforcing components, the PMA applies to every agency. The five original elements are:

- Strategic Management of Human Capital;
- Competitive Sourcing;
- Expanded Electronic Government (E-Government);
- Budget and Performance Integration; and
- Improved Financial Performance.

These components share a common goal of enhancing citizen-centered governance focused on delivering results that matter to the American public.

OMB uses an Executive Branch Management Scorecard to monitor the status and progress of agencies toward attaining PMA goals. Color-coded ratings (red, yellow, and green) are used to visually depict agency ratings. Interior also developed a scorecard to measure the bureaus performance in relation to the PMA. USGS strived to make progress in all scorecard areas during FY2005 by executing numerous activities that supported initiatives to get to green in the PMA scorecard rating process. Highlights of these are discussed below.

Strategic Management of Human Capital

During FY2005, the USGS undertook a number of initiatives designed to enhance the capabilities, engagement, and strategic alignment of the workforce, including:

Workforce Planning. In FY2005, the USGS expanded its workforce planning efforts to address the bureau's strategic goal of integrated science. In addition, workforce plans were developed and implemented for the majority of USGS science centers. The USGS expanded the features of its automated skills assessment tool, and science center managers used the tool to assess the skills of their current workforce and compare current skills to future skill needs based on their science plans. Regional managers aggregated science center plans at the regional level to identify regional strategies for acquiring critical skills.

Leadership and Management Development. During FY2005, the USGS reached the halfway point toward its goal of creating and training a critical mass of leaders at all levels of the organization. The Leadership Centered Culture Program implemented an intensive focus on supervisory and managerial development that will serve as a core element of the bureau's workforce planning efforts. The USGS also implemented the Core Competencies for Managers Model with the goal of improving managerial performance at all levels of the USGS. This effort has been linked with the USGS workforce planning effort and with the long-term Leadership-Centered Culture goals of the USGS.

Organizational Excellence Model. The USGS developed a USGS Organizational Excellence model that identifies the critical leadership and management, people, process, and structure components that support USGS science outcomes at the program, bureau, and societal level. The model provides a systemic framework for planning and decision making, communicating the components that underpin organizational success, and measuring organizational performance. The model will be used as a framework for the USGS restructuring and as a basis for developing and reporting the results of the 2006 all-employee Organizational Assessment Survey.

Workforce Diversity. Improving workforce diversity is a priority for the USGS and a significant workforce planning issue. A major initiative in FY2005 focused on complying with the requirements of the EEOC MD–715, particularly with regard to the identification of barriers that prevent the accomplishment of diversity and affirmative employment goals. The USGS worked closely with Monster Government Solutions to develop e-solutions for gathering and reporting applicant flow data. As a direct result of our efforts, USGS and other DOI Bureaus will have access to MD-715 required data. The USGS continued working with and supporting Special Emphasis Program Advisory Committees (SEPAC). The SEPACs assisted with the identification of barriers to diversity and recommended solutions to management. The USGS directed recruitment efforts to provide our regions with additional fiscal resources to establish relationships with local minority colleges and universities with majors in USGS related sciences. The USGS continues to implement the DOI Workforce Diversity Plan by focusing on goals that are measured

by outcomes in recruitment, retention, zero tolerance and management accountability

Competitive Sourcing

The USGS performs its scientific and support activities through a combination of Federal employees, contractors, and cooperators. Balancing the current workforce will require competitive sourcing of selected aspects of scientific and administrative activities in response to mandates contained in the FAIR Act.

In July 2004 the USGS Competitive Sourcing Planning Team developed a recommendation to conduct a business strategy development review of each of nine business areas encompassing all full-time equivalents within USGS. That strategy was incorporated into the USGS Competitive Sourcing Green Plan, FY2005-2008. Study plans incorporate relevant workforce planning initiatives and, where strategic directions have been identified, are focused on the long-term strategic view of the bureau's mission and on the mission of the organization undergoing competitive sourcing review. Through the Web-based commercial activities inventory collection system created by the USGS, the inventory preparers are able to accurately reflect all the commercial activities performed at the USGS. The inventory undergoes a rigorous and thorough review at all levels of authority in the USGS, including validation by the cost center managers and approvals by the regional and headquarter executives.

The USGS completed seventeen Express Reviews within the buildings and grounds maintenance and warehousing business areas. As a result of this review, the functions were retained in-house. The USGS completed the Visual Information business strategy in August 2005 and, as a result of this review, a High Performing Organization was implemented in October 2005. In August 2005, the USGS announced that a total of six separate study activities would be conducted in the Science Technician and Science Technician Support business area. Of the six studies, public announcements for a single nationwide competition of Hydrologic Data Collection and the business strategy review of the Mapping and Charting business area performed under the National Geospatial Technical Operations Center were made on September 30, 2005. A business strategy development review of the Library and Information Services business area will be completed by November 30, 2005.

Expanded E-Government

During FY2005, the USGS, in its internal review, identified no weaknesses in nine of twelve major IT systems and completed actions to address control weaknesses identified during the certification and accreditation of the remaining three major IT systems.

In FY2005, the USGS continued to support the Department and the Federal Government through its role as the managing partner of the Geospatial One Stop E-Government initiative. The USGS leads the Department's implementation of two of the five high priority areas in the DOI E-Government Strategy: 1) Geospatial Information Management and 2) Analytical Tools to Support Advanced, Integrated Science. The USGS is also spearheading the DOI-wide effort to develop the Geospatial Modernization Blueprint and is actively collaborating with other DOI Bureaus to analyze business processes and plan enterprise or cross-cutting initiatives in several other key areas, including fire science and management (implementation of the fire modernization blueprint), design and implementation of the DOI enterprise services network, and public web services.

During FY2005, USGS implemented an enterprise architecture that is consistent with and built upon the OMB Federal Enterprise Architecture and DOI Enterprise Architecture frameworks, while also addressing certain unique USGS mission-driven requirements.

The USGS has extensively adopted Grants.gov as a vehicle for its grants programs and contributed funding and/or in-kind technical expertise and scientific data to the Disaster.gov, Recreation One-Stop, and SAFECOM E-government initiatives.

Budget and Performance Integration

The integration of budget and performance is critical to the planning for and evaluation of success achieved by the USGS in application of its science to building long-term bodies of data and ensuring their relevance to partner and customer needs.

The USGS has worked very closely with the Department and OMB to establish PART evaluations for accurate and meaningful performance measures for its programs. USGS's physical integration of its budget,

regional, and planning and performance teams in the Office of Budget and Performance (OBP) and the close coordination during the development process yielded very successful results. The Assistant Secretary for Policy, Management, and Budget commended USGS on its integration of budget and performance.

Activity Based Costing Management (ABC/M) initiatives that began in FY2004 continued into FY2005. USGS is committed to this effort and modified its existing project management, time and attendance, and financial systems; however, the success of ABC/M implementation is directly proportional to the USGS's ability to communicate effectively with our employees about ABC/M and their role in its success. In FY2005, USGS began a dialogue with programs and regions using year-end FY2004 and mid-year FY2005 ABC data comparisons. As a result of these comparisons, the USGS is progressing toward amending the coding from the project to the task level.

Improved Financial Management

The Office of Administrative Policy and Services (APS) within the USGS formulates and prescribes bureau-wide financial management and accounting policies, procedures, and controls. The APS financial management environment is continuously being improved to ensure compliance with Federal laws and regulations while providing DOI and USGS executives with timely, accurate financial and performance indication.

APS continued activities begun last year to steam-line and automate certain functions, improve internal controls, enhance communication and coordination with field operations, and revise policies and procedures throughout this fiscal year.

During FY2005, USGS developed and implemented a comprehensive training plan to ensure that administrative officers and other financial staff received ongoing training in various bureau-specific procedures as well as general areas such as appropriation law and management skills.

Significant efforts by USGS to support Financial Business Management System (FBMS) development occurred during FY2005. FBMS is a major enterprise management initiative that will integrate budget formulation and planning, financial management, acquisition, property management, grants administration, and other subsidiary systems and will revamp administrative processes throughout DOI. FBMS will provide the system and process structure for DOI to modernize its operations and will enable DOI employees and managers to have better information for decisionmaking about their programs.

The scope of this project is to provide a Department-wide solution that significantly improves access to reliable, accurate, current, and complete financial and business management information to support the decisionmaking process throughout all levels of the Department, affecting all employees and operations. This includes improving our ability to obtain unqualified audit opinions, economic and efficient input and retrieval of data, and ensuring the best use of taxpayer and other available funds to promote proactive management of these funds.

FBMS has been a collaborative undertaking in Interior, which began deployment in FY2005 in certain DOI bureaus. USGS is heavily involved with system design efforts and is currently scheduled to fully implement FBMS (and replace existing financial systems) in FY2008.

And finally, APS undertook significant efforts to develop and implement a strategy to comply with the new requirements, effective in FY2006, from OMB A-123, *Management's Responsibility for Internal Control*. The Deputy CFO is the chair of the bureau's senior management council and senior assessment team, which were both created to develop the A-123 implementation strategy. USGS emphasized that risk assessments—the identification and analysis of relevant risks associated with achieving objectives and forming a basis for determining how risks should be managed—of internal control are instrumental.

Internal control reviews were done on all controls or program areas considered to be of high risk, which required a description of all event cycles and analysis of control objectives and techniques to be documented. Testing of high risk areas, to be performed in FY2006, will likely be very detailed and extensive. Areas deemed to be lower than high risk will be subjected to less extensive, but thorough evaluations that are generally less paper intensive and more cost effective and efficient.

Looking Forward:

Annually, the USGS produces a program direction document, which is a collaborative effort between the bureau program coordinators, regional managers, and scientists and is issued by the Director. It contains details on opportunities to address new science thrusts; major changes in direction of, or emphasis of, program goals and related increases or decreases in funding; opportunities supported by multiple programs; and identification of new capabilities, facilities, and expertise available to support project work in the coming year. The document describes new directions in integrated science as well as new directions and opportunities from within the disciplines. Information about the possible effects of future events, conditions, and trends are incorporated into specific discussions on a variety of scientific projects. Because the science is integrated and focuses on complex issues, the research outcome will crosscut all DOI goals.

Integrated Science Accomplishments:

The USGS continued its efforts in FY2005 to expand partnerships with other DOI bureaus, other Federal, State, and local agencies, academia, and the public sector to address diverse issues on the horizon. This effort to strengthen existing partnerships and build new ones, especially with DOI bureaus, will be the focus of a new USGS regional structure that will be implemented in FY2006. With senior-level managers dispersed throughout newly designated regions, the USGS is positioning itself to be more responsive to regional and local issues and provide the scientific expertise and leadership necessary to assist managers in solving current problems and address future science needs. In addition to the opportunities for increased communication and collaboration, USGS is also placing an increased emphasis on integrated science that will solve complex, multidisciplinary resource problems. The USGS is committed to maintaining scientific excellence as it looks for new opportunities to work with others on finding solutions on Resource Protection, Resource Use, and Advancing Scientific Knowledge.

Current examples of regional activities, highlighted below, illustrate how USGS will incorporate partnerships to conduct science and inform decisions in the future.

Understanding the Importance of Ground Water at the Great Lakes Coastline

Great Lakes nearshore areas are a focal point for water quantity and quality issues. An evaluation of the potential effects of human use of fresh ground water in nearshore areas of the Great Lakes is in need of improved scientific understanding to support wise management of water resources. The USGS studied linkages between ground-water hydrology and fish and invertebrate communities in nearshore areas along the western shoreline of Lake Erie.

The study compared the geology, the chemistry of ground water, lake water and sediments, and fish and invertebrate communities at two contrasting study sites, both underlain by fractured dolomite and thin glacial materials. At one site, flowing seeps at the edge of the lake are present, and ground-water models indicate the natural historical hydrologic condition of ground-water flow to the lake is occurring. At the second site, withdrawals for municipal, agricultural, and industrial uses have drawn down ground-water levels by as much as 150 feet, near the Lake Erie shoreline, and the USGS ground-water model indicates a reversal in flow direction of ground water away from the lake.

Amy Benson examines a container of specimens collected from Lake Erie.

This study demonstrated that critical ecosystem processes described for marine coastlines also occur in the Great Lakes. Invertebrate and young fish community structure, abundance and type of emergent vegetation, and abundance of an invasive species (Zebra mussels) all differed between the two

sites, suggesting important roles for ground water in development of the economically-important Lake Erie recreational and commercial fishery, and in the success of native and invasive nearshore biota. Results of these studies were reported in FY 2005 in the Journal of Great Lakes Research. Partners for this effort included the Michigan Department of Natural Resources and the Department of Environmental Quality, as well as The Nature Conservancy. Customers of the studies included the Great Lakes Commission, Council of Great Lakes Governors, and The International Joint Commission - The Fisheries, Aquatic and Endangered Resources Program, which will use these findings in determining plans for water use and urban planning.

Avian Population Response to Ecological Change Along the Arctic Coastal Plain, Alaska

The USGS, in collaboration with the BLM, FWS, and the North Slope Borough of Alaska, completed the second year of research in the Northeast Planning Area of the National Petroleum Reserve—Alaska (NPRA) in 2005. The work focused on internationally important populations of geese that spend their flightless molting period on the large, shallow lakes in the Teshekpuk Lake Special Area (TLSA) within the NPRA to understand the extent to which populations of geese change in spatial distribution over time, whether such change is a consequence of habitat change, and the physical and biological processes that cause habitat change.

Photographic assessments of erosion along the coastline within the TLSA. The J.W. Dalton test well site is 3 km east of Pitt Point in northcentral TLSA. Cameron Point West is 14 km east of Pitt Point.

In 2005, detailed analyses of a 26-year FWS aerial survey data set of geese densities and distribution showed substantial changes in numbers and locations among four species of geese, which have important implications for planning petroleum exploration and potential future development in the Northeast Planning Area. To examine changes in the size and shape of lakes and gross changes in nearshore habitats important to geese, aerial photography for the entire TLSA for three time periods (e.g., 1950, 1979, and 2002) was analyzed to a) assess the amount of lake area change, b) examine changes in amounts of habitat, and c) map drainages among lakes to discern their influence on draining or refilling of lakes. Measurements of salinity, nutrient content, and other water quality parameters for key lakes focused on detecting the magnitude and spatial extent of saltwater intrusion into habitats important to molting geese.

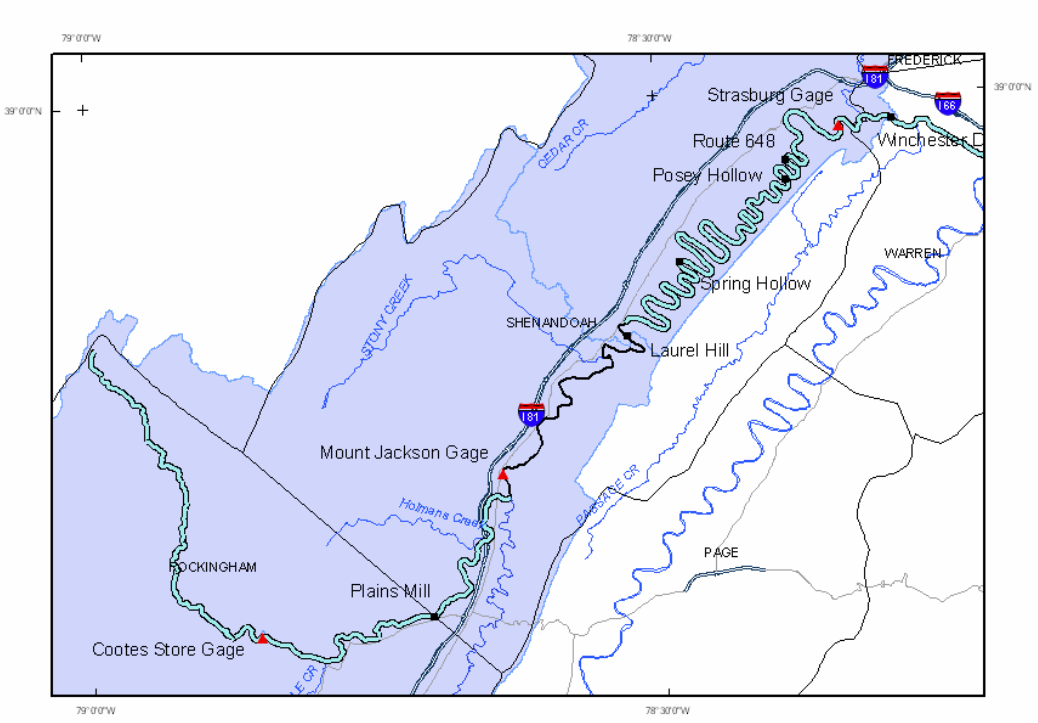
A major objective of this multi-disciplinary research is to develop decision support tools for managers responsible for planning petroleum exploration in concert with protection of DOI trust species. This resulted in a prototype Geographic Information System (GIS) model available in 2005 that included data layers from historical and contemporary sources such as remotely sensed imagery, goose surveys, elevation profiles, lake depths, hydrological parameters, land cover, climate parameters, sedimentary basins, and surficial geology.

Multidisciplinary Assessment of Hydrogeologic Systems and Water Resources of the Shenandoah Valley Region

The Northern Shenandoah Valley is underlain by karst (topography characterized by closed depressions or sinkholes, caves, and underground drainage) and fractured-rock aquifers that supply water to a rapidly increasing population. The recent prolonged drought has focused attention in this region on the quantity and sustainability of its water resources for human and ecological needs.

In FY2004, the USGS constructed ground water flow models to better define the availability of ground water and its response to current and future development. These models were constructed using environmental data that define age distributions of water in discharge from karst springs, hydrologic data derived from research seismic imaging techniques in

karst areas, and updated geologic information. The final report of the North Fork Shenandoah Minimum Instream Flow investigation was provided to the Northern Shenandoah Valley Regional Commission and local stakeholders in FY2005. Results of this study, conducted by the USGS and Virginia Polytechnic Institute, served as the technical foundation for decision making by local communities to manage water withdrawals from the North Fork of the Shenandoah River during critical low flow periods.



USGS presentation to the Minimum Instream Flow Technical Advisory Committee on the North Fork Shenandoah River Basin, Virginia and surrounding counties.

Saving the Chesapeake Bay

The USGS continued to provide critical science to help the Chesapeake Bay Program (CBP) and DOI restore water quality and vital habitats in the Bay and its watershed. In addition to its leadership in addressing nutrients and coordinating the nontidal network, USGS released reports that define the sources and delivery of sediment to the Bay needed to help improve strategies for reducing sediment that impacts underwater grasses. In partnership with the CBP and the FWS, USGS expanded the use of the Resource Lands Assessment (RLA), which identified areas of high economic and habitat value (agricultural lands, forests, wetlands, and stream corridors) that may warrant future protection and restoration. The RLA provides a regional multi-State look at the most important remaining resource lands in the Chesapeake Bay watershed. The RLA used GIS models and expert knowledge to assess the value of resource lands within the watershed, provided guidance to State and local governments in land protection strategy development, served as an information resource for the land trust community, suggested conservation focus areas to complement watershed restoration plans, and identified areas important to maintain for the forest products industry. These models will provide information for growth management practices and land preservation planning at multiple spatial scales.

Integrated ground-water/surface-water interaction and circulation model for Biscayne Bay, Florida

USGS has developed a fully functional integrated ground-water/surface-water interaction and circulation model for use by USGS, NPS, and other agencies for incorporation into a broader USGS-led coral reef ecosystem study in Biscayne National Park. The model and the results have a high degree of transferability to coral reef ecosystems worldwide. Since coral reefs are currently in serious decline, a comprehensive understanding of the physical and biological factors related to coral reef health is of critical importance to the future of this ecosystem resource.

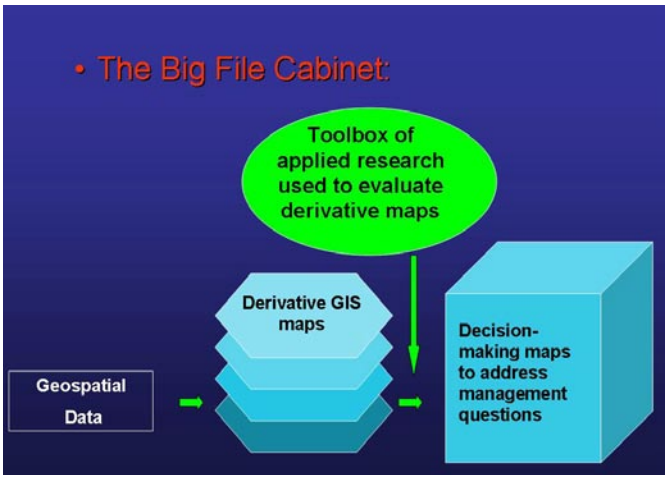
The USGS water circulation model is an important keystone in establishing an accurate understanding of many important processes, such as salinity and temperature thresholds for coral reef vitality, causes of coral reef diseases, terrestrial sediment flux into the reef environment, water quality degradation, biodiversity of reef fish communities, biodiversity and health of seagrass in reef and estuary ecosystems, and health of the reef food web.

Greater Everglades Restoration

In collaboration with Florida's Department of Environmental Protection and the South Florida Water Management District, USGS conducted field and experimental research to develop a better understanding of the movement, distribution, and biogeochemical processes of sulfur in the natural system. Research into ecosystem history was expanded into Biscayne Park to establish a baseline of current conditions of the coastal system upon which the impacts of the Comprehensive Everglades Restoration Plan (CERP) can be evaluated. USGS scientists continued to be active participants in multiple Everglades restoration work groups and committees including the South Florida Ecosystem Restoration Task Force's Working Group and Science Coordination Group, CERP Project Delivery Teams and CERP RECOVER teams. Additionally, USGS participated in multiple workshops to integrate science towards specific DOI, CERP and RECOVER science needs in support of the DOI Everglades Restoration Science Plan. USGS work in the Everglades is essential to provide the scientific framework that will guide this enormous restoration effort.

Integration of Science and Land Management: THE BIG FILE CABINET

Federal land managers must use the best available science in reaching land-use decisions and in formulating plans for continued stewardship of Federal lands. The interface between science and land management can be difficult to penetrate especially in the vast tracks of western lands where human impacts and natural processes combine in complex ways to affect land health as well as water and air quality. USGS, BLM, and BOR scientists and land managers are collaborating to understand the complex systems responsible for harmful concentrations of selenium, salt, and sediment in portions of the upper Colorado River basin. They jointly developed the "Big File Cabinet" (BFC) concept to penetrate the science and land management interface. The BFC is a data management and analysis concept that allows interactive use of multiple data layers to answer scientific and management questions.



Building blocks of the Big File Cabinet.

The basic building blocks of the BFC are a dynamic collection of geospatial data and a toolbox comprising science-based software that is used to evaluate GIS maps derived from the original data. The analyses result in maps used by land managers for science-based land-management decisions. The system's flexibility allows the inclusion of revised and new data and additional and upgraded science-based interpretive tools to permit better informed decisions.

A prototype BFC system was developed and tested in FY2004 using existing Internet-accessible diverse USGS and BLM databases. In FY2005, the prototype system was refined with additional data and tools and field-tested in the Gunnison Gorge National Conservation Area. This evolving technology is designed to be flexible and transferable to other BLM management units and to other USGS projects.

Science Forum Brings Disciplines Together

In June, New England-based USGS managers gathered for the second New England Science Forum. This grassroots effort brought together nearly 50 science managers from throughout the Eastern Region to share their work and discuss partnerships they have built with Federal, State, regional, and local entities.

The Science Forum showcased integrated science in priority research areas such as Penobscot River, Cape Cod, and the Connecticut River-Long Island Sound. Geologists, biologists, hydrologists, and geographers engaged in discussions on issues related to subsurface geology-groundwater quality, habitat degradation, and establishing ecological flows. One particularly successful outcome included the commitment of Eastern Region water availability funds to jumpstart

a project for the Connecticut River Watershed. That funding has been matched 150 percent by The Nature Conservancy.

As the USGS continues to participate in regional partnerships, more science forums like this one will occur in the future. USGS scientists will share results of current research and discuss ideas to better leverage the total expertise of the USGS to address regional issues.

Hurricane Katrina impact on the future:

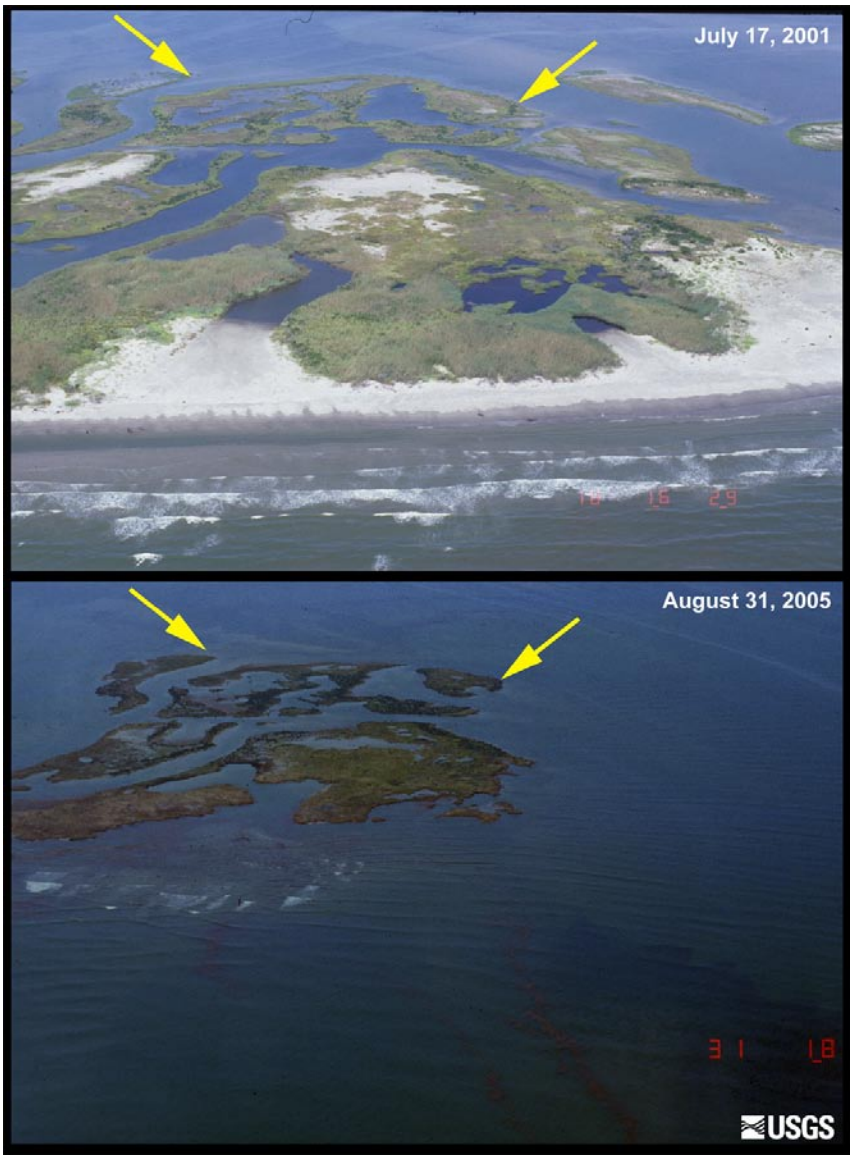
Impacts of Hurricane Katrina on the physical, ecological, social, and economic structure of the Gulf of Mexico coastal zone will have enormous and diverse long-term impacts. Initial USGS observations and past studies of hurricanes in the region suggest that changes will be widespread and persistent. Changes are likely to substantially increase the vulnerability of the region to future storm events as well as altering the physical and ecological structure in ways that pose significant risk to public, environmental, and economic health. The USGS is the primary Federal agency responsible for describing the ecological, geological, hydrologic, and geographic structure and resources of the Nation. USGS information and research products will be critical elements of efforts to assess the impacts of Hurricane Katrina and the future vulnerability of coastal communities and resources to coastal change hazards.

Post-Katrina recovery and restoration efforts will be both immediate and prolonged. Responses will be proposed to reduce future hazard vulnerability, protect and restore natural resources, increase hazard resilience, and mitigate the impacts of Katrina on the environmental, economic, and public health of the region. USGS efforts will provide immediate support for impact and risk assessments and for assessments of the effectiveness of proposed response and recovery actions. Data and information resources will provide the essential framework to identify critical impacts and define the human, physical, and ecological setting in which post-Katrina actions will be developed. Models and decision-support tools will provide local, State, and Federal agencies with tools to evaluate the relative effectiveness, long-term maintenance requirements, and secondary impacts of alternative actions proposed. In addition to its value in responding to Hurricane Katrina, this effort will improve the responsiveness to assessment and forecasting of future hurricane and severe storm impacts in the Gulf of Mexico region and nationwide.

Bureau operations were significantly impacted by these events in September 2005, and will continue to be impacted based on future involvement, as needed. USGS provided 22 boats and numerous personnel for search and rescue operations, evacuation and delivery of food and water in the weeks immediately following the hurricane event.

USGS researchers Scott Wilson, Clint Jeske, and Bob Keeland, scientists from the USGS National Wetlands Research Center, use their equipment to rescue those stranded in New Orleans.

USGS employees in Lafayette, LA provided relief to a camp at the University of Louisiana. USGS geographers provided thousands of pinpoint maps to 911 calls for rescue operations. USGS employees replaced or repaired damaged stream gauges throughout the regions to restore flood warning capacity; and coordinated with other federal agencies to provide geospatial information, maps, satellite images and conducting scientific assessments to help response and recovery operations. Crews were still sampling and testing water in Jackson, MS as well as water pumped out of New Orleans and into Lake Pontchartrain in October 2005. The USGS National Wetlands Research Center made aerial photo maps and high scale imagery maps used to determine the status of the cities now in the recovery phase. And additional administrative assistance was provided to the Department to coordinate hurricane recovery efforts.



Hurricane Katrina made landfall as a category 4 storm in Plaquemines Parish, LA on August 29, 2005.

Aerial video, still photography, and laser altimetry surveys of post-storm beach conditions were collected August 31 and September 1, 2005 for comparison with earlier data. The comparisons show the nature, magnitude, and spatial variability of coastal changes such as beach erosion, overwash deposition, and island breaching. These data will also be used to further refine predictive models of coastal impacts from severe storms. The data were made available to local, state, and Federal agencies for purposes of disaster recovery and erosion mitigation.

The first image, taken in July 2001, shows narrow sandy beaches and adjacent overwash sandflats, low vegetated dunes, and backbarrier marshes broken by ponds and channels.

The second image shows the same location on August 31, 2005, two days after Hurricane Katrina made landfall on the Louisiana and Mississippi coastline. Storm surge and large waves from Hurricane Katrina submerged the islands, stripped sand from the beaches, and eroded large sections of the marsh. Today, few recognizable landforms are left on the Chandeleur Island chain.

Limitations to Our Financial Statements

The principal financial statements have been presented to report the financial position and results of operations of the USGS, pursuant to the requirements of 31 U.S.C. 3515(b).

While the statements have been prepared from the books and records of USGS in accordance with accounting principles generally accepted in the U.S. for Federal entities and the formats prescribed by the Office of Management and Budget, the statements are in addition to the financial reports used to monitor and control budgetary resources which are prepared from the same books and records.

The financial statements should be read with the realization that they are for a component of the United States government, a sovereign entity.

Section II
Performance Data and Analysis

USGS scientists performing a geophysical survey of Dankard Creek, PA, in conjunction with performing cooperative work with the U. S. Department of Energy / National Energy Technology Laboratory.

Contents

Message from the Director, Office of Budget and Performance

The USGS is in a state of transition and is faced with an array of challenges; these challenges provide opportunities for the USGS to enhance its performance and ensure accountability. The integration of budget and performance is paramount to the planning for and evaluation of success achieved by the USGS in relation to what costs are being expended. The USGS has worked closely with the Department of the Interior to establish accurate and meaningful performance measures for its programs in accordance to the PMA. The most overarching and pervasive of the five management reform items on the PMA is the Budget and Performance Integration initiative; this type of integration is commonly referred to as performance-based budgeting. Focusing on results and accountability with performance monitoring and financial reporting is a sound practice for increased USGS productivity. The USGS continues to receive commendation from the Department for effective budget and performance integration in its annual budget submissions. The Office of Budget and Performance pilots the USGS's budget and performance integration efforts. The budget, regional, and planning and performance teams of the Office of Budget and Performance work in concert to develop and produce budget and performance documents that are fully integrated with respect to descriptions of base programs and analyses; associated funding and FTE implications; and the expected standards of performance and how they will be evaluated. These teams coordinate activities and work closely with bureau program staff to understand and evaluate the science programs' budget and performance levels, ensuring delivery of mission and responsiveness to USGS executive management decisions, Departmental concerns, and Administrative policies. In FY2005, the USGS continued an improved approach toward budget and performance integration, initiated in FY2004. Last year, the OBP instituted an aggressive schedule that ensured on-time delivery of the annual budget justification and performance plan to the Congress in early February 2005. The FY2005 performance budget aligned staffing and funding requests with mission related strategic objectives. In future years, the bureau plans to allocate funding at more detailed levels to enhance the budget and performance integration effort.

In FY2005, the USGS continued to advance its workforce planning efforts with specific emphasis on restructuring initiatives across the Geospatial Information and Geography disciplines and on various competitive sourcing studies, including visual information activities. Workforce strategies will continue to address and improve the USGS's ability to determine the gap between current skills and future skill needs, and to develop recruitment, retention, training, competitive sourcing, succession planning, and other strategies for addressing identified skills gap. Science center workforce plans will assist managers in the new regional structure to develop strategies for meeting critical skills necessary to address the long-term science program goals within their new scope of management responsibilities.

The challenges of linking performance results to the budget are complicated for the USGS due to the fact that many objectives are accomplished indirectly. The USGS's primary product is scientific information. Quantitative measures of USGS performance are tangible and directly related to inputs, but they are primarily outputs (e.g., number of scientific papers published, data collected) that convey little sense of the true benefits gained by the American people from the information the USGS produces. The outcome related to USGS-provided scientific information is that a stakeholder has the information with which to make an informed decision. Quantitative impact measures (e.g., number of counties, or comparable jurisdictions, that have adopted improved building codes, land-use plans, emergency response plans, or other hazard mitigation measures based on USGS hazards information) are only indirectly linked to USGS outcomes. To truly realize the impact of USGS science on land and resource decisionmaking and, therefore, its relevance, the USGS measures customer satisfaction with quality, availability and utility of our science products. The USGS also takes our ability to leverage resources through partnerships as an additional indication of relevance. The USGS continued its efforts in FY2005 to expand partnerships with other Interior bureaus, other Federal, State, and local agencies, academia, and the public sector to address diverse issues on the landscape. The effort to strengthen existing partnerships and build new ones, especially with DOI bureaus, is enhanced through USGS regional offices, which work closely with regional and local DOI bureau offices. The close proximity of USGS managers and scientists to DOI land and resource managers allows the USGS to be more responsive to regional and local issues and provide the scientific expertise and leadership necessary to assist managers in solving current problems and address future science needs. The USGS is committed to maintaining scientific excellence as it looks for new opportunities to work with others in finding solutions related to the Department's Strategic Plan's goals of Resource Protection, Resource Use, and Advancing Scientific Knowledge.

Improving programs by focusing on results is an integral component of the Administration's Budget and Performance Integration initiative. The PMA is used by the USGS as a framework to strengthen our workforce, lower the cost of doing business through competition, improve financial performance, increase the use of information technology and E-Government capabilities, and integrate budget decisions with performance data. The Office of Management and Budget assesses the USGS status and progress for each of the PMA initiatives on a quarterly basis. The result is a "living plan" that continues to be updated quarterly to remove completed tasks and add new objectives and tasks to meet new or revised requirements and goals. Program evaluations are the foundation on which the USGS gauges performance relative to the DOI End Outcome measure for soundness of methodology, accuracy, and reliability of science. The USGS exercises a robust, cyclical compulsory for science planning, program reviews, cost center reviews, management control reviews, and peer reviews; the USGS continues to refine these processes. In addition to internal controls, external reviews from the GAO, OMB, Office of the Inspector General, and other organizations such as the National Academy of Public Administration and the National Research Council are essential to upholding the USGS's reputation for scientific excellence and credibility as well as providing guidance for future research needs. Yet another vehicle employed by the USGS to ensure product quality and relevance is the Standard Customer Satisfaction/ Outcome Surveys. Since first begun in FY2001, more than 1,600 customers—mostly scientists and resource managers—have described their satisfaction with various aspects of more than 40 different USGS science products. In response to the expressed needs of customers, the USGS has made many enhancements to these products. The surveys all follow the same format, although each one is modified to meet a specific program's customer information needs. The final outcome of each survey is immediately useful to the program manager. The results meet the goals of the DOI Strategic Plan and support PART evaluations.

The USGS has a long and rigorous record of conducting external peer reviews for research, performance evaluations for programs, and management control reviews. This suite of tools is now supplemented further and coordinated with the OMB Program Assessment Rating Tool (PART) evaluations, and is also beginning to include the results of Activity Based Costing/ Management (ABC/M) to instruct auxiliary planning processes. Existing performance budgeting tools, such as PART, provide a vehicle for facilitating baseline reviews of program functions and activities. USGS successfully worked with OMB and the Department to establish PART evaluations for accurate and meaningful measures for its programs. USGS has particularly focused on program improvement through the PART process. At the close of FY2005, USGS completed PART evaluations stood at five programs "moderately effective," one program "effective," and none rating "results not demonstrated." The Department's quarterly reviews ensure accountability of PART programs, milestone progress explanations, target delay explanations, and any pertinent implementation impacts of Action Plan execution.

Becoming a more results-oriented organization has required USGS to make significant changes in internal decisionmaking processes to develop a clear information technology strategy and amend their organizational culture. In order to meet these changing requirements, the USGS moved to an Activity Based Costing/Management system. Identifying activity costs is complex and requires a significant level of effort. ABC/M initiatives that began in FY2004 continued in FY2005. USGS is fully committed to this effort and has modified existing project management, time and attendance, and financial systems; however, the success of ABC/M is directly proportional to the USGS's ability to communicate effectively with employees about ABC/M and their role in its success. Capturing the cost of activities will enable the USGS to better document the basis for cost-share projects, assessment, and cost recovery. In FY2005, USGS began a dialogue with programs and regions using year-end FY2004 and mid-year FY2005 ABC data comparisons for consistency in coding, appropriations of code designations to project activities, accuracy of project planning and employee reporting. One significant adjustment evidenced from the year-end and mid-year review was the fact that more granularity could be obtained by coding at the task level rather than the project level. After receiving approval from the Bureau Program Council, the USGS is moving toward amending the coding to the task level and BASIS+, the USGS project-planning tool, is being modified to accommodate this change for FY2006 implementation.

The USGS remains committed to continue its excellent performance in the conduct of its science.

Carla Burzyk
Director, Office of Budget and Performance and Deputy Chief Financial Officer
October 2005

Performance Budget Results

The integration of budget and performance is critical to the planning for and evaluation of success achieved by the USGS in the application of its science to building long-term bodies of data and ensuring their relevance to partner and customer needs. The USGS has been particularly successful in this endeavor, owing to the physical integration of its budget, regional, and planning and performance teams in its Office of Budget and Performance Management.

Working in constant contact, these teams jointly develop and produce budget and performance documents that are fully integrated with respect to description of base programs and analyses, their funding and FTE implications, what the standards of their performance will be and how they will be evaluated. The three teams work closely with bureau program staff to understand, evaluate, and plan the science programs' budget and performance levels, ensuring responsiveness to USGS executive management decisions, departmental concerns, and Administration policies.

After achieving "green" on the FY2004 scorecard for Budget and Performance Integration, the OMB and DOI criteria for scoring were raised with a focus on PART and institutionalizing program improvement processes for FY2005.

FY2004 Criteria	FY2005 Criteria
Integrated budget planning	Quarterly integrated assessment of budget & performance
Budget & plans include outcome goals, output targets and resources	Routine application of performance information in budget decisions
Budget activities and staff align with program targets	Link individual employee performance evaluations to mission performance
Costs link to specific work activities, outputs, outcomes	Report/estimate full cost of changes in performance goals
Program performance evaluations document effectiveness	Apply PART efficiency measures to improve Performance
Capital asset planning integrates budget and performance	Apply PART Information in resource and program management decisionmaking

USGS again climbed from yellow to green with current status as follows.

FY2005 Criteria	Status
Quarterly integrated assessment of budget & performance	For FY2005, the USGS provided quarterly status of all relevant key end and intermediate outcome measures to the Department in the ABC/M performance module with explanation of exceptions and projected achievement of annual targets for all key end and intermediate outcome measures and status of costs. Budget documents include • explanations of performance with respect to prior year and funding change; • relationship of actual expenditures to work activities for each goal and budget activity and proposed increases and decreases by goal; and • described relationship of performance between years.

FY2005 Criteria	Status
Routine application of performance information in budget decisions	All bureau accounts can map budget activities and subactivities to performance end outcome and intermediate measure targets. The USGS Performance Budget fully complies with requirements for a Bureau Operating Plan. It is fully integrated with the Budget Justification and describes the relationship between all relevant Strategic Plan intermediate goals and bureau performance measure targets. All budgetary changes are documented with performance information in the Program Change section of the budget justification. Long-term trends are available for the existing performance measures, spanning 1998 – 2004, that carried over into the new plan. Baselines were established in FY2004, and targets were set through FY2008, for DOI and bureau-specific measures. For bureau measures, funding changes demonstrated annual and strategic impacts. Targets are adjusted annually to reflect actual performance in the prior year as well as enacted appropriations for the budget/performance year.
Link individual employee performance evaluations to mission performance	From linking the performance plans for all SES and direct reports to organizational performance in FY2004, USGS expanded to link all employee plans to organizational performance for FY2005.
Report/estimate full cost of changes in performance goals	Implementation of ABC produced actual cost data for work activities by discipline, by budget activity and subactivity, by program, and by DOI end outcome goals, etc., from FFS and our budget planning system. USGS is currently in the process of linking cost to outputs. ABC reports and data can be extracted by all managers at all levels on a daily basis for verifying and validating, and for performing analyses for decisionmaking. Continued effort is needed to standardize processes and ensure consistency of interpretation before ABC data can be routinely used to manage. Bureau/Office can estimate marginal cost of incremental or decremented performance changes by using information in performance and budget documents and cost data. Although the Bureau could, in most cases, specify year of performance achievement for an incremental change, that knowledge would not be useful unless taken in the context of the entire budget which is not currently projecting year of completion for base funding.
Apply PART efficiency measures to improve Performance	OMB-approved measures exist for 100 percent of USGS PARTed programs. OMB-approved efficiency measures, however, are not sensitive to quarterly monitoring of cost efficiency. The implementation progress of PART milestones relative to PART recommendations and Action Plans can be tracked quarterly in MITS and reported during quarterly reviews.
Apply PART Information in resource and program management decisionmaking	USGS can report quarterly on how programmatic- and/or resource -reallocation decisions are made if they occur. OMB-approved efficiency measures, however, are not sensitive to quarterly monitoring of cost efficiency. In specific instances, an indication of change in timeliness can be observed and explained. For example: For percent of the Nation's coverage for high-resolution geospatial data, the accelerated rate of increase of 13 percent was due to the emphasis on obtaining first-time coverage of high resolution orthoimagery over urban areas.

PART

With program evaluations and peer review integral to our culture, USGS has particularly focused on program improvement through the PART process. By the end of FY2005, USGS completed PART evaluations stand at five programs "moderately effective," one program "effective," and none rating "adequate," "ineffective" or "results not demonstrated." All OMB recommendations have been addressed with action plans having milestones and targets approved by the Department and OMB and tracked in the Department's Management Initiatives Tracking System (MITS). All actions are on schedule or, when milestones appear to be delayed for cause, are renegotiated with OMB and the Department and amended in MITS. The Department quarterly reviews ensure accountability of PART programs, recommendations implemented, milestone progress explanations, target delay explanations, and any pertinent implementation impacts of Action Plan implementation. In addition, prior and current year efficiency measures results are reported. Further information on each recently conducted program evaluation is provided later in this section.

Activity Based Cost/Management (ABC/M)

Year-end FY2004 data and mid-year FY2005 data were reviewed for consistency in coding, appropriateness of code designations to project activities, accuracy of project planning, and employee reporting. One significant adjustment to the assignment of ABC codes that has arisen from the year-end and mid-year reviews is the need to apply the codes to the task level in project planning rather than at the project level. USGS coded ABC activities at the project level to capture the full cost of doing work. For example, all effort related to research. But USGS science projects vary in structure and may incorporate multiple work activities and products. Since these work activities are often separated at the task level within a project, more granularity can be obtained by coding at the task level. USGS is preparing changes to its BASIS+ system in FY2005 to begin capturing ABC data at the task level in FY2006.

In addition, USGS continues striving to understand relationships and leveraging management information. The process of developing these standardized outputs further refined the definition templates and further contributed to more consistent application. ABC reports and data can be extracted by all managers at all levels on a daily basis for verifying and validating and for performing analyses for decisionmaking. Although close, continued efforts are needed to standardize processes and ensure consistency of interpretation before ABC data can be routinely used to manage.

USGS Activities

The USGS conducts research, monitoring, and assessments to contribute to understanding the natural world—America's lands, water, and biological resources and processes as well as its natural hazards. By combining biology, geology, hydrology, and geography in one agency, the USGS is uniquely positioned to provide science information and conduct scientific research that ensures an integrated approach to advance scientific knowledge and utilize the latest technologies to provide timely answers and products and improve the quality of life for the communities we serve.

The USGS provides reliable, impartial information to the citizens of this country and to the global community in the form of maps, data, and reports containing analyses and interpretations of water, energy, mineral, and biological resources; land surfaces; marine environments; geologic structures; natural hazards; and dynamic processes of the Earth. The USGS provides scientific information to understand issues such as coastal erosion and pollution, sea-level rise, loss of wetlands and marine habitats, the geological processes controlling the invasion of cheat grass, and the role of dust in desert ecosystem health.

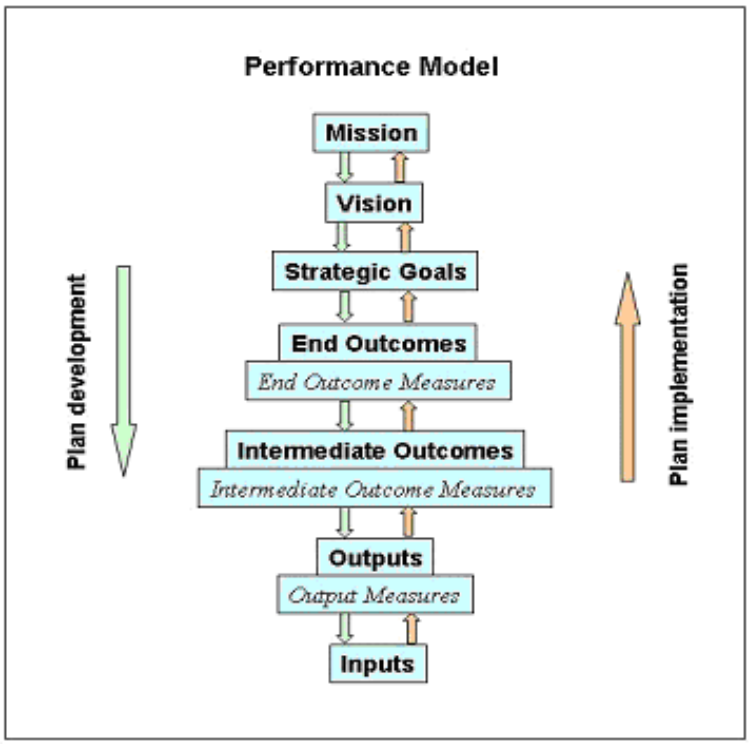
Armed with this knowledge, decisionmakers can respond better to both natural and human-induced changes. Through the application of science, decisionmakers are able to address complex issues concerning public safety, our environment, and natural resources; to address public health questions; and to promote public prosperity for the future well being of our country. USGS data and information are used daily by managers, planners, and citizens to understand, respond to, and plan for changes in the environment.

USGS research and data products support the Department's resource and land management needs and provide the science information needed by other Federal, State, tribal, and local government agencies; industry groups; agricultural interests; academia; non-profit organizations; and the American public to guide planning, management, and regulatory programs.

Performance Plan Development

Natural science research is the foundation of the Department of the Interior's FY2003-2008 Strategic Plan, and USGS science directly supports three of the four DOI mission areas.

As highlighted on page 5 of the MD&A, a logic model (see performance model at right) was used to develop GPRA goals across the organization to create one Department-wide strategic plan implemented in FY2004. The DOI Strategic Plan provides a high-level overview of performance, setting large mission goals and broad program objectives. Its greatest value, day-by-day, comes from connecting that larger view with each day's ground-level work.



The plan structure is focused on end outcomes, selected high-priority intermediate outcomes, and on performance measures, indicators, and output that verify progress toward outcome achievement. Just as each mission area has its own strategic goals, each strategic goal has its own end outcome goals and measures. Supporting those, in turn, are intermediate outcome goals and measures, with outputs and inputs below that. Targets are set at every level, providing numerical measures of USGS accomplishment.

Outputs are typically quantifiable products of work processes or activities. Activity-based costing, in its second year of implementation at USGS, holds the potential to connect outputs to costs and create a powerful management tool for identifying efficiencies, focus attention on achievement and innovation, and move more quickly to spread best practices throughout the organization.

Performance measures are also generated through application of OMB's Program Assessment Rating Tool (PART). The PART was developed by OMB to assess the effectiveness of Federal programs and help inform management actions, budget requests, and legislative proposals directed at achieving results. The PART examines various factors that contribute to the effectiveness of a program and requires that conclusions be explained and substantiated with evidence. The PART assesses if and how program evaluation is used to inform program planning and to corroborate program results.

Highlighted in the Management Discussion and Analysis section, USGS performance data and accomplishments are further expanded in this section to include all performance measures that were used to request funding and to match achievement of these metrics against the targets that were set on enactment of the appropriation. USGS outcomes and measures focus on providing science to customers for solving the Nation's complex land- and resource -management problems and to minimize the loss of life and property from natural disasters. The ultimate outcome related to providing scientific information is that our customers and partners have the information with which to make informed decisions. Performance measures serve as stepping stones to the goal and the outcome, keeping the program on track, on time, and on budget.

Summary Performance Result

The PART performance measures and their performance results are included with the strategic plan measures within the tables to follow. The following legend applies:

▼ Target Not Met

▲ Target Exceeded

√ Target Met

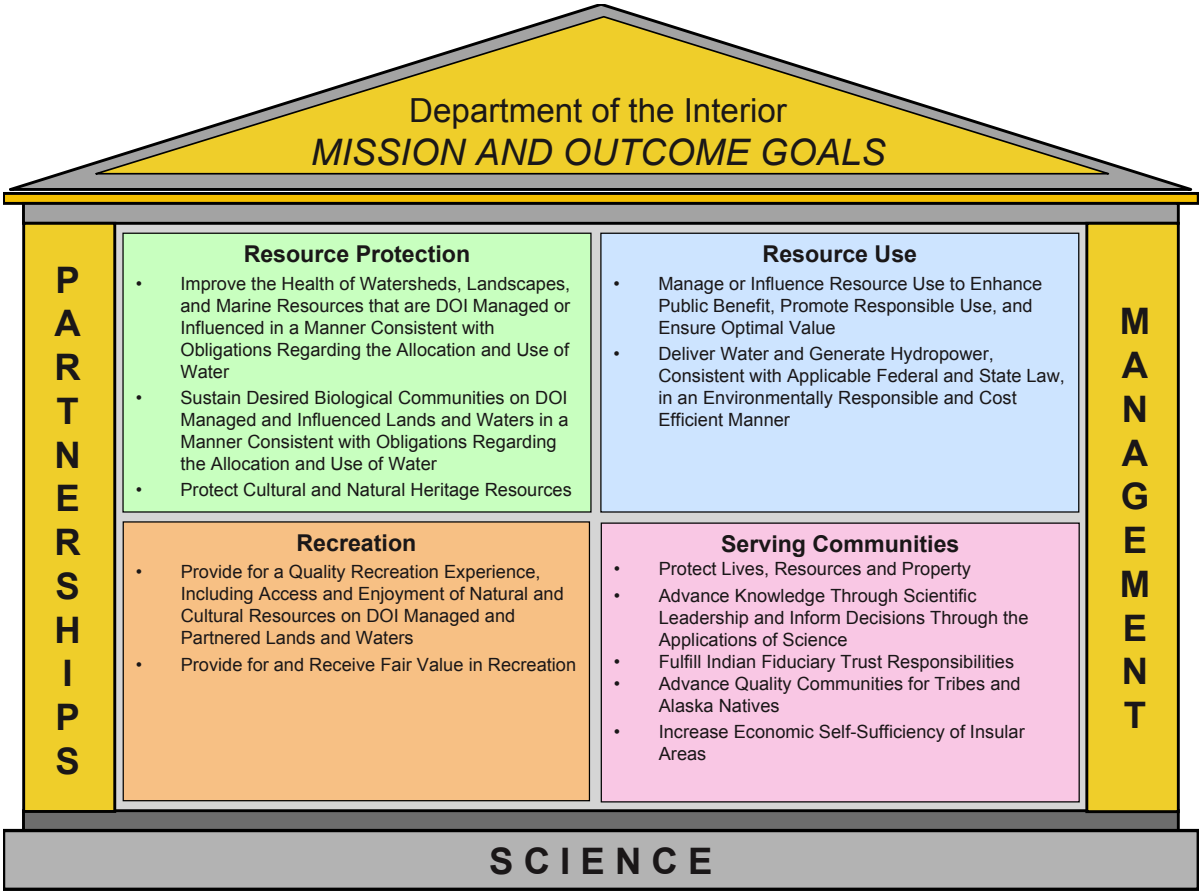
Each analysis of results begins with Target Met; Target Not Met; or Target Exceeded. USGS is applying the Department's 5 percent threshold application in determining the result, which dictates that if the result is within 5 percent of the target performance, this generates a "goal met" rating. The summary result for actual or estimated values that are less than 95 percent or more than 105 percent of the target must be either Target Not Met or Target Exceeded, respectively.

The Department's Strategic Plan is available at the following address: http://www.doi.gov/ppp/strat_plan_fy2003_2008.pdf

How We Performed in FY2005:

USGS met or exceeded 90 percent of the performance measures monitoring during FY2005. Summary results for these measures are presented at right.

For the most part, the measures not met resulted from diversion of efforts to disaster-related data collection for multiple catastrophic events and changing priorities of partners who contribute data. Planned data collection will resume when immediate priorities are met.



This structure depicts the four mission areas of the Department and the supporting pillars of partnerships and management. Science is presented as the foundation for informed resource-management decisions.

Summary of How We Performed in FY2005:

End Outcome Goal	Total Number of Measures	Number of Measures Met	Number of Measures Exceeded	Number of Measures Not Met
Resource Protection: Protect the Nation's Natural, Cultural, and Heritage Resources				
Improve the health of watersheds, landscapes, and marine resources that are DOI-managed or -influenced in a manner consistent with obligations regarding the allocation and use of water.	11	2	9	0
Sustain biological communities on DOI-managed and -influenced lands and waters in a manner consistent with obligations regarding the allocation and use of water.	16	7	9	0
Total	27	9	18	0
Resource Use: Manage Resources to Promote Responsible Use and Sustain a Dynamic Economy				
Energy – Manage or influence resource use to enhance public benefit, promote responsible use, and ensure optimal value.	11	3	8	0
Non-energy minerals – Manage or influence resource use to enhance public benefit, promote responsible use, and ensure optimal value.	12	9	3	0
Total	23	12	11	0
Serving Communities: Safeguard Lives, Property, and Assets; Advance Scientific Knowledge; and Improve the Quality of Life for the Communities We Serve				
Protect lives, resources, and property.	25	17	6	2
Advance knowledge through scientific leadership and inform decisions through the application of science.	71*	37	20	14
Total	96	54	25	17

*One measure was rebaselined.

In the following pages, we present each of our performance measures with historical and current year results in relationship to their applicable GPRA and end outcome goals. For those measures that did not meet expected results, comments are provided immediately following the tables depicting performance measure results. Highlights of significant accomplishments illustrating our work performed are also included in the following pages.

Resource Protection: Protect the Nation's Natural, Cultural, and Heritage Resources

End Outcome Goal:

Improve the health of watersheds, landscapes, and marine resources that are DOI-managed or -influenced in a manner consistent with obligations regarding the allocation and use of water.

√ Targets Met = 2	▼ Targets Not Met = 0	▲ Targets Exceeded = 9

Performance	Results				
Intermediate Outcome: Restore and maintain proper functions to watersheds and landscape					
Restore Fire Adapted Ecosystems: Percentage satisfaction with scientific and technical products (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	97%	100%	≥ 80%	100%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					
Performance Outputs:					
Number of systematic analyses and investigations delivered to customers	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	11	11	4	8	26
▲ Target Exceeded. During the FY2005 PART of contributing programs, USGS worked on standardizing definitions and consistency in their application. Effectively the measures were rebaselined and outyear targets will be adjusted accordingly. However, the process will need another year to test before we can become confident in predicting results.					
Number of formal workshops or training provided to customers	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	1	1	1	1	6
▲ Target Exceeded. During the FY2005 PART of contributing programs, USGS worked on standardizing definitions and consistency in their application. Effectively the measures were rebaselined and outyear targets will be adjusted accordingly. However, the process will need another year to test before we can become confident in predicting results.					

Intermediate Outcome: Improve information base, information management, and technical assistance					
Forge Effective Partnerships: Satisfaction score (number score) on resource protection partnerships (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	97%	97%	≥ 80%	94%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					
Customer Satisfaction: Percentage satisfaction with scientific and technical products and assistance	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	97%	97%	≥ 80%	94%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					

Performance	Results				
Intermediate Outcome: Improve information base, information management, and technical assistance					
Customer Satisfaction: Timeliness of scientific and technical products	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	95%	93%	93%	≥ 80%	97%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					
Customer Satisfaction: Usefulness of scientific and technical products	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	98%	97%	97%	≥ 80%	96%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					
Quality: Percentage of watershed and landscape-related research studies validated through appropriate peer review or independent review (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	100%	100%	100%	100%
√ Target Met.					
Facilities Condition: Conservation and biological research facilities are in fair to good condition as measured by the Facilities Condition Index (lower FCI is good)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	.24	.24	.24
√ Target Met.					
Performance Outputs:					
Number of systematic analyses and investigations delivered to customers	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	143	151	107	177	347
▲ Target Exceeded. During the FY2005 PART of contributing programs, USGS worked on standardizing definitions and consistency in their application. Effectively the measures were rebaselined and outyear targets will be adjusted accordingly. However, the process will need another year to test before we can become confident in predicting results.					
Number of formal workshops or training provided to customers	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	63	63	20	23	92
▲ Target Exceeded. During the FY2005 PART of contributing programs, USGS worked on standardizing definitions and consistency in their application. Effectively the measures were rebaselined and outyear targets will be adjusted accordingly. However, the process will need another year to test before we can become confident in predicting results.					

Accomplishments

Restoration of Bottomland Hardwood Forested Wetlands in the Lower Mississippi Valley and Gulf Coastal Plain

This effort is an evaluation of restoration efforts by various Federal agencies in coastal plain areas providing science-based technical information to improve restoration efforts. Through Federal programs authorized under the Farm Bill (Wetland Reserve Program), the Coastal Barrier Resources Act, and the Coastal Wetlands Planning, Protection, and Restoration Act, DOI works closely with State and local governments and the private sector to create incentives and guidance for wetland restoration where mitigation of wetland loss is a high priority. To provide these incentives and guidelines, USGS conducted two workshops in FY 2005. On March 8-9, 2005, USGS conducted a workshop to assess the effects of USDA conservation practices on wetland functions and ecosystem services in the Mississippi River alluvial valley. On March 22-23, 2005, USGS held a workshop on Afforestation in the Lower Mississippi River Alluvial Valley with the Lower Mississippi Valley Joint Venture Forest Resource Working Group. This accomplishment relates to the Output Measure: "Number of workshops or training provided to customers."

Response of Coastal Ecosystems to Sea Level Rise: Assessing Wetland Elevation Changes, Potential for Submergence, and Management Options

USGS has conducted the first analyses of data from a developing global network of wetland elevation monitoring stations identifying key processes that control the rate and mode of wetland submergence or survival in the face of future climate change. These analyses were conducted as part of a special symposium organized by scientists from the USGS, England, and Australia at the 2004 INTECOL Wetlands Conference in Utrecht, the Netherlands. Federal and State managers and policy makers concerned with coastal wetlands and the resources they support (e.g., migratory birds), sea level rise, and global climate change will use this information to predict the future vulnerability of coastal wetlands to climate-change-induced sea level rise, particularly when used to drive numerical models that consider more than just future changes in sea level (e.g., changes in surface runoff and groundwater, local sediment). This accomplishment relates to the Output Measure "Number of systematic analyses & investigations delivered to customers."

Flood Storage Capacity, Greenhouse Gas Emissions, and Carbon Sequestration of Wetlands in the Prairie Pothole Region of the Northern Great Plains

USGS has determined that prairie pothole wetlands are carbon sinks in North America, and that agriculture, the dominant land use in the region, has caused most of these wetlands to shift from sinks to sources of atmospheric CO^2. Wetland restoration was determined to have more than twice the potential as no-till agriculture to sequester atmospheric CO^2, although wetlands only occupy about 17 percent of the prairie pothole region. This project describes the size of the carbon sink attributable to wetlands in North America and documents the carbon storage the United States claimed for restored wetlands in the most recent report of the greenhouse emissions and sinks as required to comply with the United Nations Framework Convention on Climate Change. As a result, publications were prepared documenting the carbon storage potential of prairie pothole wetlands. Federal and State managers and policy makers dealing with wetland restoration and management and with conservation practices related to agriculture and the Farm Bill, climate change, greenhouse gas emissions, and carbon sequestration will also use this information. This accomplishment relates to the Output Measure "Number of systematic analyses & investigations delivered to customers."

Resource Protection: Protect the Nation's Natural, Cultural, and Heritage Resources

End Outcome Goal:

Sustain biological communities on DOI-managed and -influenced lands and waters in a manner consistent with obligations regarding the allocation and use of water.

√ Targets Met = 7	▼ Targets Not Met = 0	▲ Targets Exceeded = 9

Performance	Results				
Intermediate Outcome: Create habitat conditions for desired biological communities to flourish					
Invasive Species — Prevention: Percentage of invasive species research focused on pathways and prevention methods	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	2%	8%	7%	6%	6%
√ Target Met.					
Invasive Species — Early Detection: Percentage of invasive species research focused on detection and assessments of new invasions	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	2%	3%	8%	5%	5%
√ Target Met.					
Invasive Species — Rapid Response: Percentage of invasive species research focused on rapid management response to new invaders	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	<1%	<1%	1%	2%	2%
√ Target Met.					
Invasive Species — Control & Management: Percentage of invasive species research focused on providing information and methods for control and management of established invasive species	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	95%	89%	84%	87%	87%
√ Target Met.					
Invasive Species — Forge Effective Partnerships: Satisfaction score (number score) on resource protection partnerships	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	97%	99%	≥ 80%	100%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					
Performance Outputs:					
Number of systematic analyses and investigations delivered to customers	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	16	20	51	24	85
▲ Target Exceeded. During the FY2005 PART of contributing programs, USGS worked on standardizing definitions and consistency in their application. Effectively the measures were rebaselined and outyear targets will be adjusted accordingly. However, the process will need another year to test before we can become confident in predicting results.					

Performance	Results				
Number of formal workshops or training provided to customers	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	1	1	1	1	26
▲ Target Exceeded. During the FY2005 PART of contributing programs, USGS worked on standardizing definitions and consistency in their application. Effectively the measures were rebaselined and outyear targets will be adjusted accordingly. However, the process will need another year to test before we can become confident in predicting results.					

Intermediate Outcome: Improve information base, information management, and technical assistance					
Forge Effective Partnerships: Satisfaction score (number score) on resource protection partnerships (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	97%	98%	≥ 80%	100%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					

Shared Data: Percentage of DOI databases with species information that is available throughout DOI and other partners	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	100%	100%	100%	100%
√ Target Met.					
Customer Satisfaction: Percent satisfaction with DOI scientific and technical information	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	99%	98%	≥ 80%	87%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					
Customer Satisfaction: Timeliness of scientific and technical information	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	97%	97%	97%	≥ 80%	98%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					
Customer Satisfaction: Usefulness of scientific and technical information	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	99%	98%	98%	≥ 80%	87%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					
Quality: Percentage of biological research studies validated through appropriate peer review or independent review (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	100%	100%	100%	100%
√ Target Met.					

Performance	Results				
Facilities Condition: Conservation and biological research facilities are in fair-to-good condition as measured by the Facilities Condition Index (lower FCI is good) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	.19	.19	.19
√ Target Met.					
Performance Outputs:					
Number of systematic analyses and investigations delivered to customers	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	816	796	797	838	1,092
▲ Target Exceeded. During the FY2005 PART of contributing programs, USGS worked on standardizing definitions and consistency in their application. Effectively the measures were rebaselined and outyear targets will be adjusted accordingly. However, the process will need another year to test before we can become confident in predicting results.					
Number of formal workshops or training provided to customers	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	125	97	50	55	148
▲ Target Exceeded. During the FY2005 PART of contributing programs, USGS worked on standardizing definitions and consistency in their application. Effectively the measures were rebaselined and outyear targets will be adjusted accordingly. However, the process will need another year to test before we can become confident in predicting results.					

Accomplishments

USGS Scientists are Helping Bring Shad Back to New England Anglers

USGS scientists collaborated with State, Federal, and commercial partners in the design and evaluation of a mock fish passage entrance structure at a power canal at Turners Falls, MA. Poor fish passage through Northeast Generation's power canal has resulted in fewer American shad available for sport fishing in the New Hampshire and Vermont sections of the Connecticut River.

State and Federal fishery agencies, acting through the Fish Passage Subcommittee of the Connecticut River Atlantic Salmon Commission's Technical Committee, sought USGS research to investigate potential solutions to the power canal fish passage bottleneck. Fewer than 20 percent of the shad entering the power canal from another fish ladder successfully entered the gatehouse fish ladder at the top end of the canal. Experiments demonstrated that, once fish enter the last fish ladder at Turners Falls, over 70 percent will continue through the ladder, allowing them to proceed to the New Hampshire and Vermont sections of the river.

The evaluation looked at the impact of various flow conditions and successful entrance rates of tagged shad. Data from the research showed that fish entrance rates through the modified mock fish passage entrance were four times higher than rates through the existing entrance. Fishery agency and utility company staff have been briefed on the results. Based on these data, all parties concluded that a second year of evaluation was warranted and would likely lead to the construction of a new fish entrance the following year. It is expected that a much higher proportion of power canal shad will migrate to New Hampshire and Vermont waters, supporting a significant new sport fishery in those two States. This accomplishment relates to the Output Measure: "Number of systematic analyses & investigations delivered to customers."

Western Freshwater and Anadromous Fish: Life History and Ecosystem Process Requirements

USGS scientists investigated endangered razorback suckers and bonytails in semi-natural rearing channels adjacent to the Colorado River in cooperation with other Federal and State agencies to aid in restoration of these rare species. There is substantial evidence that adult and larval suckers once utilized backwater

habitat, but that this floodplain habitat, which provided critical nursery areas to native fish, was drained or isolated from the river by levee construction, dredging, and drainage.

Management efforts to help these species began with the creation of the Colorado River Fishery Project in 1976, but wild populations have continued to decline and in some cases have totally disappeared. Except for newly emergent larvae, young fish are essentially absent from the wild, and predation of larval and small juvenile fish by non-native fish species in the river is evident.

These cooperative investigations provide managers with an understanding of the relationship between the survival of these rare species and available habitat, and the influence of non-native competitors and predators. The fourth and last annual report (Cibola High Levee Pond, Open-File Report 2005-1075) contains basic scientific information on the biology, life history, and critical habitat requirements of these rare and endangered species found only in the Colorado River basin. Federal (FWS, BLM, BOR), State, and tribal fisheries and river managers will use this information in meeting Endangered Species Act requirements. Reports of requested scientific information will provide fishery managers with a quantitative basis for making adaptive management decisions for these and other important at-risk species in managed rivers in the presence of invasive fishes. This accomplishment relates to the Output Measure: "Number of systematic analyses & investigations delivered to customers."

Cooperative White-Tailed Deer Studies in Pennsylvania

With almost one million deer hunters in Pennsylvania, deer hunting supports a multi-million dollar industry. The Pennsylvania Cooperative Research Unit, one of 40 Cooperative Research Units in which USGS partners with State agencies and universities, worked with the Pennsylvania Game Commission to conduct a 3-year study (2002-04) to examine survival and dispersal of male white-tailed deer. More than 2,000 deer were trapped, and 549 bucks were instrumented with radio transmitters.

The goal of the work was to determine whether new harvest regulations instituted by the Pennsylvania Game Commission achieved the intended goal of protecting yearling bucks from harvest during the hunting season. The new regulations were found to be effective, increasing survival by two to three times, providing the Commission with information valuable to securing hunter support for the new regulations. In addition, deer movement data from this research project has been incorporated into the State's response plan should chronic wasting disease be discovered in the State. Telemetry data demonstrated that landscape features influence dispersal patterns, both direction and distance. Knowledge of movement in relation to landscape features will be used to delineate appropriate containment zones if an outbreak of chronic wasting disease occurs. This accomplishment relates to the Output Measure: "Number of systematic analyses & investigations delivered to customers."

Telemetry transmitters placed on white-tailed deer were used to determine deer movement and dispersal patterns in Pennsylvania.

Resource Use: Manage Resources to Promote Responsible Use and Sustain a Dynamic Economy

End Outcome Goal:

Energy – Manage or influence resource use to enhance public benefit, promote responsible use, and ensure optimal value.

√ Targets Met = 3	▼ Targets Not Met = 0	▲ Targets Exceeded = 8

Performance	Results				
Intermediate Outcome: Improve information base, information management, and technical assistance					
Baseline Information: Number of targeted basins with oil and gas resource assessments available to support management decisions (DOI strategic plan key measure and PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	7	5	6	7
▲ Target Exceeded. International Basin completed earlier than expected due to greater emphasis.					
Quality & Utility of Information: Percentage of customers satisfied with timeliness of data	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	100%	100%	≥ 80%	99%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					
Quality & Utility of Information: Percentage of accessible data	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	95%	95%	95%	≥ 80%	96%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					
Quality & Utility of Information: Percentage of customers for which energy data meets their needs	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	93%	93%	93%	≥ 80%	95%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					
Quality and Utility of Information: Percentage of studies validated through appropriate peer review or independent review (DOI strategic plan key measure and PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	100%	100%	100%	100%
√ Target Met.					
Performance Outputs:					
Number of systematic analyses and investigations delivered to customers	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	4	7	5	6	7
▲ Target Exceeded. International Basin completed earlier than expected due to greater emphasis.					

Performance	Results				
Number of formal workshops or training provided to customers	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	10	9	8	8	8
√ Target Met.					
Percentage of targeted analyses/investigations delivered which are cited by identified partners within 3 years of delivery (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	80%	80%	86%
▲ Target Exceeded. Users planning process was accelerated and USGS science was used earlier than anticipated/ expected.					
Average cost of a systematic analysis or investigation (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	$2.75M	$2.2M	$2.75M	$2.73M
√ Target Met.					
Intermediate Outcome: Improve information base, information management, and technical assistance					
Number of annual gigabytes collected	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	.745	42.038	97.793
▲ Target Exceeded. Able to process more data and images than we expected.					
Number of cumulative gigabytes managed	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	2.713	211.458	253.496	351.289
▲ Target Exceeded. Able to process more data and images than we expected.					

Accomplishments

The Energy Resources Program (ERP) conducts national and global energy resource assessments of oil, natural gas, coalbed methane, gas hydrates, coal, and geothermal resources; evaluates risks for environmental and ecological degradation associated with the occurrence, production, and use of energy resources; and provides information upon which prediction, mitigation, and remediation technologies can be based. These investigations enable the Nation to make sound decisions regarding domestic energy production with an understanding of potential impacts on the environment.

Central North Slope (between NPRA and Yukon Flats), Eastern Great Basin, Michigan Basin, North Cuba Basin, Raton Basin, and Yukon Flats

The USGS continues to update its oil and gas resource assessments, and in FY2005, the number of targeted basins with oil and gas resource assessments available to support management decisions encompassed the six basins named above. These completed products delivered robust, geologically-based assessments of the undiscovered, technically recoverable oil and gas resources in these basins. The domestic resource assessments support the Energy Policy

and Conservation Act (EPCA) Amendments of 2000 and form the basis for the periodic report delivered to Congress as required by the Act. The EPCA work is a multi-agency effort conducted by USGS, which provides the technically recoverable, undiscovered oil and gas resource assessments; BLM, which provides the restrictions and impediments to development on BLM-managed lands; U.S. Forest Service (USFS), which provides the restrictions and impediments to development on Forest Service-managed lands; and the Department of Energy and Energy Information Administration, which provides current production and reserves of the oil and gas on these lands. The international assessments, part of ERP World Energy Assessment project, are cited and used by international organizations all over the world. These assessments are important because the USGS is the only organization to provide these geologically based oil and gas resource assessments, which are an invaluable source of data used by U.S. law makers, policy makers, resource managers, foreign governments, industry consortia, academia, and nongovernmental groups. This accomplishment relates to the Output Measure: "Number of systematic analyses & investigations delivered to customers."

Evaluating New Energy Resources to Meet Future Needs: Gas Hydrates

July 2005 marked the release of a special volume detailing recent research efforts associated with the Mallik Drilling Project, a project to investigate the ability to produce natural gas from natural gas (methane) hydrates. Natural gas hydrates, which are unconventional accumulations of natural gas (methane) trapped in ice-like structures with water, represent an immense energy resource underlying large portions of the world's arctic continental areas and marine continental shelves. While these accumulations ultimately may yield important sources of energy for the world, additional scientific and engineering research needs to be undertaken to render feasible gas production from these accumulations. The USGS was a scientific co-lead in this effort and is co-editor of this landmark publication. This accomplishment supports the Output Measure: "Percentage of targeted analyses/investigations delivered which are cited by identified partners within 3 years of delivery."

Revised Coal Resource Assessment Methodology

The USGS ERP has revised the USGS methodology for coal resource assessment to determine that a subset of coal resources is available for mining and is technically recoverable (i.e., the reserve base). This revised reserve base assessment methodology was peer reviewed and published in 2005. Federal and State land managers use this resource's estimates and information from this methodology to support land-use decisions; environmental regulators use the information to evaluate compliance with regulations stemming from the 1990 amendments to the Clean Air Act; and economists use the results to forecast economic trends at regional and national scales. Industry uses this information to evaluate the availability and quality of coal feedstock to electricity-generating power plants and to achieve compliance with emission standards and other environmental regulations. Specific customers include the Securities and Exchange Commission, BLM, the Office of Surface Mining, the Energy Information Administration, and State geological surveys, among others. This accomplishment relates to the Output Measure: "Number of systematic analyses & investigations delivered to customers (assessments)."

Carbon Dioxide Sequestration Assessment Methodology

A unique, preliminary carbon dioxide sequestration assessment methodology was created in FY2005 to evaluate the carbon dioxide storage capacity in geologic reservoirs such as depleted oil and gas reservoirs and saline water-bearing formations. This methodology provides a robust, geologically based approach for: (1) assessing the volume of carbon dioxide that can be safely stored in the subsurface for hundreds to thousands of years or longer; and (2) identifying potential storage locations that can be evaluated for cost-effectiveness, storage integrity, and environmental and land-use issues.

There is growing recognition, both domestically and internationally, of the need to mitigate emissions of carbon dioxide– a greenhouse gas –to the atmosphere from human activities. The storage of carbon dioxide in geologic reservoirs, which are capable of retaining

carbon dioxide for long times, is viewed as an emerging technology that is a critical component of national and international strategies aimed at reducing carbon dioxide emissions. The political and regulatory ramifications of this endeavor require objective, scientifically based geologic assessments of carbon dioxide storage capacity. Aside from the USGS, no Federal agency or research organization has the ability and requisite experience to conduct these geologic-framework-based assessments. The landmark release of this assessment methodology will provide Federal land managers, State agencies, and policy makers with the information and means to begin evaluating the feasibility of domestic storage options and develop appropriate strategies and policy for storing carbon dioxide. Given the global reach of this issue, the assessment methodology, when released, may be used internationally by foreign governments and geological surveys. This accomplishment relates to the Output Measure: "Number of systematic analyses & investigations delivered to customers (assessments)."

Assessing Alaska's Energy Resources

USGS scientists have recently completed assessments of petroleum resources in Yukon Flats and the Central North Slope of Alaska. The latter study, when combined with previous USGS work, now enables a more comprehensive evaluation of petroleum resources along Alaska's North Slope. In addition, USGS scientists, with BLM support, conducted geologic, remote sensing, and geographic information system analyses in a portion of Alaska's North Slope. The surficial geology maps produced as a result of this effort may help to efficiently identify areas containing aggregate (gravel), needed for infrastructure to support petroleum resource development, while minimizing the potential disturbance to the land surface and fragile ecosystems. At the request of the Department, the ERP will also update its economic analysis of the ANWR 1002 area of the North Slope. The cumulative information gained from these efforts enables resource managers and policy makers to make informed decisions and develop responsible strategies regarding energy resource development. This accomplishment relates to the Output Measure: "Number of systematic analyses & investigations delivered to customers (assessments)."

Technical Assistance

In FY2005, the ERP provided eight formal workshops or training for customers. Examples of these events include: (1) a workshop with the Nevada State Geological Survey on the geology and petroleum resources of the Eastern Great Basin; (2) gas hydrate methodology development meetings with Minerals Management Service, for their assessment of outer continental shelf (OCS) hydrates; and (3) petroleum assessment methodology with Colombian visitors from their Ministry of Energy. This accomplishment relates to the Output Measure: "Number of formal workshops or training provided to customers."

Refined Product Delivery and Program Planning in Response to the PART Recommendations

In FY2005, the ERP continued to follow up on recommended actions from the ERP PART, including the continuing need to make reports and data more accessible and user friendly. In accordance with this recommendation, the ERP has streamlined three Web sites in order to make products, information, and other data delivered via the Web seamless to customers. These efforts were undertaken to better assist customers, particularly other Federal agencies, in efficiently searching for and successfully obtaining USGS energy-related data and products. In accordance with another PART recommendation –that a 5-year program plan be drafted to reflect performance measures in accordance with the PART process –the ERP is currently drafting a new program plan that is consistent with PART performance measures. Refining vision, mission, goals, defining core competencies, and identifying new priority areas of study are all in process as the plan evolves. Procedures for developing this plan are in place at the bureau level, and ERP has engaged a variety of stakeholders, both within and outside the USGS, in the process. These accomplishments support the following Outcome Measures: "Percentage of customers for which energy data meets their needs," and "Percentage of data is accessible."

Resource Use: Manage Resources to Promote Responsible Use and Sustain a Dynamic Economy

End Outcome Goal:

Non-energy minerals – Manage or influence resource use to enhance public benefit, promote responsible use, and ensure optimal value.

√ Targets Met = 9	▼ Targets Not Met = 0	▲ Targets Exceeded = 3

Performance	Results				
Intermediate Outcome: Improve information base, information management, and technical assistance					
Baseline Information: Average square miles of the United States with non-energy mineral information available to support management decisions (DOI strategic plan key measure and PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	2,368,794	2,401,329	2,987,340	3,097,647
√ Target Met.					
Quality & Utility of Information: Percentage of U. S. with geologic, geochemical, geophysical, and mineral locality data (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	67%	68%	84%	87%
√ Target Met.					
Quality & Utility of Information: Percentage of customers satisfied with timeliness of data	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	78%	78%	78%	78%	100%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					
Quality & Utility of Information: Percentage of customers for which minerals data meets their needs	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	84%	84%	84%	84%	100%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					
Quality & Utility of Information: Percentage of studies validated through appropriate peer review or independent review (DOI strategic plan key measure and PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	100%	100%	100%	100%
√ Target Met.					

Performance	Results				
Performance Outputs:					
Number of systematic analyses and investigations delivered to customers (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	5	4	5	3	3
√ Target Met.					
Number of cumulative gigabytes managed	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	1.818	15.420	16.021	16.131
√ Target Met.					
Number of formal workshops or training provided to customers (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	8	9	8	8	8
√ Target Met.					
Number of mineral commodity reports available for decisions (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	733	720	746
√ Target Met.					
Intermediate Outcome: Improve information base, information management, and technical assistance					
Percentage of targeted analyses/investigations delivered that are cited by identified partners within 3 years of delivery (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	80%	80%	80%	87%
▲ Target Exceeded. USGS science was used earlier than anticipated/expected.					
Percentage of expected responses for which canvas forms have been converted to electronic format (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	58%	80%	81%
√ Target Met.					
Average cost of a systematic analysis or investigation (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	$4.125M	$4.306M	$4.18M	$4.18M
√ Target Met.					

Accomplishments

Using Strontium Isotopes as an Exploration Tool for World Class Ore Deposits

Mineral Resources Program (MRP) scientists have discovered that strontium isotopes can be important indicators of world-class ore deposits. Millions of years ago, metal and nutrient laden brines and petroleum were discharged from sedimentary rocks into marine basins at sea floor vents. The fluid discharge events were sometimes large enough to cause a global shift in the strontium isotopic signature of the ocean, making it possible for scientists today to chemically analyze fossils in drill core samples and identify when and where the strongest shifts occurred. These chemically distinct layers can be correlated with some of the world's largest deposits of lead, zinc, gold, manganese, nickel, molybdenum, and phosphorite. The use of strontium isotopes as an indicator of world-class ore deposits has great potential as an exploration tool for undiscovered mineral deposits and is of particular interest to industry. Future work will also investigate the potential role of these fluid expulsion events on global ocean chemistry, ancient ecosystems, and climate change. This accomplishment relates to the Output Measure: "Number of systematic analyses & investigations delivered to customers."

USGS Geophysical Methods Used to Target Ore Deposits in Alaska

MRP scientists have investigated the mineral potential of the Nikolai flood basalt province, a 230-million-year-old feature produced by volcanism in the central Alaska Range. Geologic and geophysical methods were used to investigate controls on the Fish Lakes/Tangle Lakes area, which appears to have been one of the main vent sites for volcanism. Recent studies by the USGS and BLM have defined a zone of potential mineralization more than 10 miles in length.

Based on these findings, along with detailed mapping and geochemical data from industry and the State of Alaska, industry has developed models indicating that the region may be a primary target for significant deposits of nickel, platinum-group elements, and gold. This accomplishment relates to the Output Measure: "Number of systematic analyses & investigations delivered to customers."

View looking northeast into the Alaska Range, east of the Canwell mafic-ultramafic complex. Reconnaissance mapping in this area has identified ultramafic rocks of uncertain age and association, which may be part of the Triassic Nikolai large igneous province (LIP). Hughes 500D C-LHQ helicopter for scale.

Soil Nutrients

Many soils in southeastern Utah are protected from wind erosion by biological soil crusts. When these crusts are disturbed by land use, soils become more susceptible to erosion. Studies of never-grazed grasslands in Canyonlands National Park in comparison to adjacent areas that were grazed until 1974 show that the historically grazed areas have a reduced content of surface silt-sized particles and soil carbon and nitrogen, as a result of wind erosion, even after 30 years of recovery. The USGS study suggests that livestock grazing and resulting nutrient loss by wind erosion of soils have long lasting effects on the soil fertility of native grasslands in this area and should be considered in management decisions related to the long-term sustainability of grazing in arid environments. This accomplishment relates to the Output Measure: "Number of systematic analyses & investigations delivered to customers."

Easy Access to Internet-Based Mineral Resource Data

Consistent, seamless Internet-based databases of the United States are important tools for land-use planners and a wide variety of researchers because they provide a way to rapidly respond to the need for information on a regional scale; they provide better information because of consistent data standards; and they provide direct access to live databases. The MRP supports

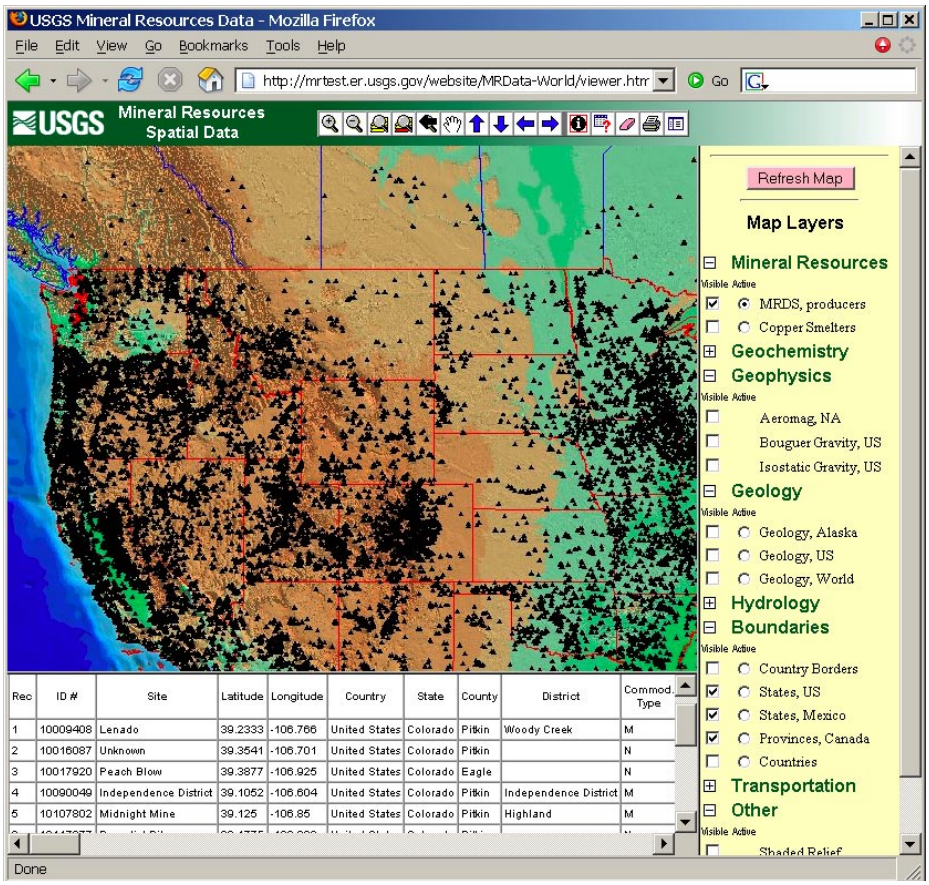
an ongoing effort to coordinate the development of national-scale geologic, geochemical, geophysical, and mineral resource databases and the migration of existing databases to standard models and formats that are available to both internal and external users.

This year, the Spatial Data Delivery project finished implementing new client Web mapping software, which allows users to combine minerals data with data from other Web sites, as well as their own data, into a single map. A new user interface was added to the Web site to permit users to download portions of geographic and/or thematic datasets that are tailored for their specific needs. Land-use data from a land-management agency may be combined with geochemical or mineralogical data from MRP to create a map to meet the users' specific needs.

The public Web site, available at http://mrdata.usgs.gov, now serves more than 40 national and/or global geoscience data themes in addition to various base data layers. As of mid-FY2005, the Web site served more than 275 unique users per day from more than 75 countries. The Web site averaged more than 50,000 hits per week and was available 99 percent of the time. This accomplishment relates to the Output Measure: "Number of systematic analyses & investigations delivered to customers."

Impact of China on the Economy: Use of Minerals Information

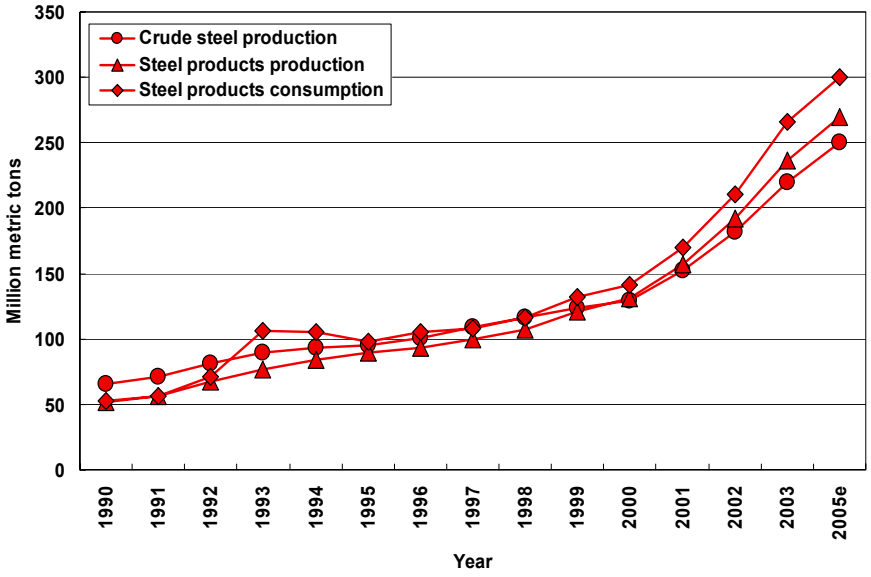
A presentation by scientists supported by the MRP at the Mineral Economics and Management Society in Washington, D.C., demonstrated that continued strong economic growth in China and other developing countries with large populations has important implications for the economy and national security of the United States. The rapid growth in developing countries is greatly increasing global mineral consumption, changing global patterns of mineral production and trade, and increasing releases to the environment.



The updated opening Web page for the public Website: http://mrdata.usgs.gov.

As a result, reliable information for economic and national security planning and development of public policy is increasingly important. Continued growth of the economies of China and other large developing countries could result in a period of rising prices for mineral commodities. A pattern of rising prices contrasts with the trend of the last 30 years, during which the prices of many minerals declined. Over the next 20 years, mineral commodity price trends may more closely resemble the period from 1950 to 1970, when a larger proportion of the world's economies were undergoing development. Additional information about this important topic was released in November 2004 and is available at http://pubs.usgs.gov/of/2004/1374/. This accomplishment relates to the Output Measure: "Number of mineral commodity reports available for decisions."

China's Production and Consumption of Steel



Graph showing China's production and consumption of steel, 1990-2005. In 2005, China's crude steel production is estimated to be more than the United States and Japan's crude steel production combined and at the same time China is importing both crude steel and steel products. The rapid increase in steel production and consumption, beginning in 2000, marks the beginning of the heavy manufacturing stage. Data for 2005 estimated. (From Menzie and others, USGS Open-File Report 2004-1374.)

Impartial Assessment of Mining-Related Environmental Problems, Marinduque Island, Philippines

At the request of the Philippines government, USGS scientists led an interagency team from the United States to assess mining-related environmental problems, including potential health effects, and mine-safety issues at Marinduque Island, Philippines. Over several decades, open-pit copper mining at two different sites has resulted in the release of large volumes of tailings, mine wastes, and acid mine waters into rivers and nearshore marine environments. By collecting new data on water quality, soil and tailings chemistry, and aquatic ecology, team scientists were able to prioritize the mining-related issues that posed the greatest risk to public safety, the environment, and human health. They were also able to assess the relative strengths and weaknesses of potential remedial options. The available data suggest that a variety of human health problems (such as elevated levels of lead in blood) in some island residents cannot conclusively be linked to the mining activities, as previously believed. The team provided recommendations for further environmental monitoring and extensive health assessment studies needed to more accurately understand the extent and nature of mining-related impacts on the environment and human health. This accomplishment relates to the Output Measure: "Number of systematic analyses & investigations delivered to customers."

Photographic panorama showing erosion of mine waste dumps into the lower Makulapnit siltation impoundment. Digital composite of three photographs by H. Miller, J. Madsen, taken in June 2003.

Serving Communities: Safeguard Lives, Property, and Assets; Advance Scientific Knowledge; and Improve the Quality of Life for the Communities We Serve

End Outcome Goal:

Protect lives, resources, and property.

√ Targets Met = 17	▼ Targets Not Met = 2	▲ Targets Exceeded = 6

Performance	**Results**				
End Outcome Measure: Protect lives, resources, and property					
Hazards: Percentage of communities using DOI science on hazard mitigation, preparedness, and avoidance for each hazard-management activity (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	39.5%	43.2%	45.9%	44.6%
√ Target Met.					
Decisionmaker Satisfaction: Met need for information to help achieve goal of reduced risk (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	97%	98%	98%	≥ 80%	99%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					

Intermediate Outcome: Improve public safety and security and protect public resources from damage					
Facilities Condition: Buildings (administrative, employee housing) are in fair-to-good condition as measured by the Facilities Condition Index (FCI) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	.20	.20	.20
√ Target Met.					

Intermediate Outcome: Provide information to assist communities in managing risks from natural hazards					
Use Rate — Earthquakes: Percentage of communities using DOI science on hazard mitigation, preparedness, and avoidance for each hazard management activity	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	56.5%	62.7%	63.4%	63.4%
√ Target Met.					
Use Rate — Landslides: Percentage of communities using DOI science on hazard mitigation, preparedness, and avoidance for each hazard management activity	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	3.3%	3.7%	3.9%	3.9%
√ Target Met.					

Performance	Results				
Use Rate — Volcanoes: Percentage of communities using DOI science on hazard mitigation, preparedness, and avoidance for each hazard management activity	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	58.6%	63.3%	70.3%	66.4%
▼ Target Not Met. A community is counted if a hazard response plan is in place or if there is a long traditions of close interaction between the USGS and the threatened communities. Diversion of the Cascades Volcano Observatory workforce to the Mount St. Helen's response lasted through all of FY05, delaying completion of the Central Cascades response plan, and causing the Program to fall short of the goal for FY2005. Had the Central Cascade plan been completed, the target would have been exceeded by 2 communities.					
Use Rate — Landslide Hazards: Number of responses to inquiries from the public, educators, and public officials to the National Landslide Information Center on hazard mitigation, preparedness, and avoidance strategies for landslide hazards	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	1,600	1,600	1,600	1,600	5,200
▲ Target Exceeded. Increased due to the prolonged landslide season we had in 2005 and the fact that we had a lot of media coverage.					

Intermediate Outcome: Provide information to assist communities in managing risks from natural hazards					
Adequacy: Percentage of sampled stakeholders reporting adequacy of science base to inform decisionmaking for each hazard-management activity (volcanoes, earthquakes, etc.) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	97%	98%	≥ 80%	99%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					
Adequacy — Earthquake Hazards: Percentage of customers for which earthquake hazards data meets their needs	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	97%	97%	≥ 80%	97%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					
Performance Outputs:					
Number of risk/hazard assessments delivered to customers	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	5	4	3	5	6
▲ Target Exceeded.					
Number of real-time earthquake sensors (reported yearly and cumulative at the end of the year) (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	96 (cum 425)	46 (cum 428)	95 (cum 523)	40 (cum 563)	40 (cum 563)
√ Target Met.					
Number of formal workshops or training provided to customers	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	6	13	14	14	21
√ Target Met.					

Performance	Results				
Number of sites (mobile or fixed) monitored for ground deformation to identify volcanic activity	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	75	85	86	88
√ Target Met.					
Adoption of National Seismic Hazard Maps by NEHRP provisions and International Building Codes (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	0	1	0	0	0
√ Target Met.					
Number of urban areas for which detailed seismic hazard maps are completed (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	0	1	2	3	3
√ Target Met.					
Number of areas or locations for which geophysical models exist that are used to interpret monitoring data (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	3	4	4 ⅓	4 ⅓
√ Target Met.					
Number of metropolitan regions where Shakemap is incorporated into emergency procedures (PART measure)	2002 Actual	2003 Actual	2004 Actual	2004 Planned	2004 Actual
	3	4	5	5	5
√ Target Met.					
Number of volcanoes for which information supports public-safety decisions (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	45	48	49	51	51
√ Target Met.					

Intermediate Outcome: Provide information to assist communities in managing risks from natural hazards					
Percentage of potentially hazardous volcanoes with published hazard assessments (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	58.6%	61.4%	61.4%	62.8%	62.8%
√ Target Met.					
Percentage of potentially active volcanoes monitored (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	66%	67%	72%	72.9%
√ Target Met.					

Performance	Results				
Number of counties, or comparable jurisdictions, that have adopted improved building codes, land-use plans, emergency response plans, or other hazard mitigation measures based on USGS earthquake-hazards information (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	503	559	565	565
√ Target Met.					
Number of counties, or comparable jurisdictions, that have adopted improved building codes, land-use plans, emergency-response plans, or other hazard-mitigation measures based on USGS landslide hazards information (Baseline is 1,800 counties and parks with moderate-to-high landslide susceptibility in the U.S. (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	60	68	71	71
√ Target Met.					
Number of counties, or comparable jurisdictions, that have adopted improved building codes, land-use plans, emergency-response plans, or other hazard-mitigation measures based on USGS volcano-hazards information (Baseline is 256 at-risk) (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	162	162	180	170
▼ Target Not Met. A community is counted if a hazard response plan is in place or if there is a long tradition of close interaction between the USGS and the threatened communities. Diversion of the Cascades Volcano Observatory workforce to the Mount St. Helen's response lasted through all of FY05, delaying completion of the Central Cascades response plan, and causing the Program to fall short of the goal for FY2005. Had the Central Cascade plan been completed, the target would have been exceeded by 2 communities.					
Percentage data availability for real-time data from the GSN (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	89%	90%	90.5%	90%	89%
√ Target Met.					
Data processing and notification costs per unit volume of input data from earthquake sensors in monitoring networks (in cost per gigabyte) (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	1.007 $k/Gb	.90 $k/Gb	0.990 $k/Gb	0.79 $k/Gb
▲ Target Exceeded. The change in performance does not reflect any USGS operational or management action or practice. It results from an unplanned 5% increase in the volume of data provided by our principal partner in the operation of the GSN and an improved (and lower) estimate of contractor costs (the largest element of the operational cost for data processing) resulting from improved cost accounting procedures.					

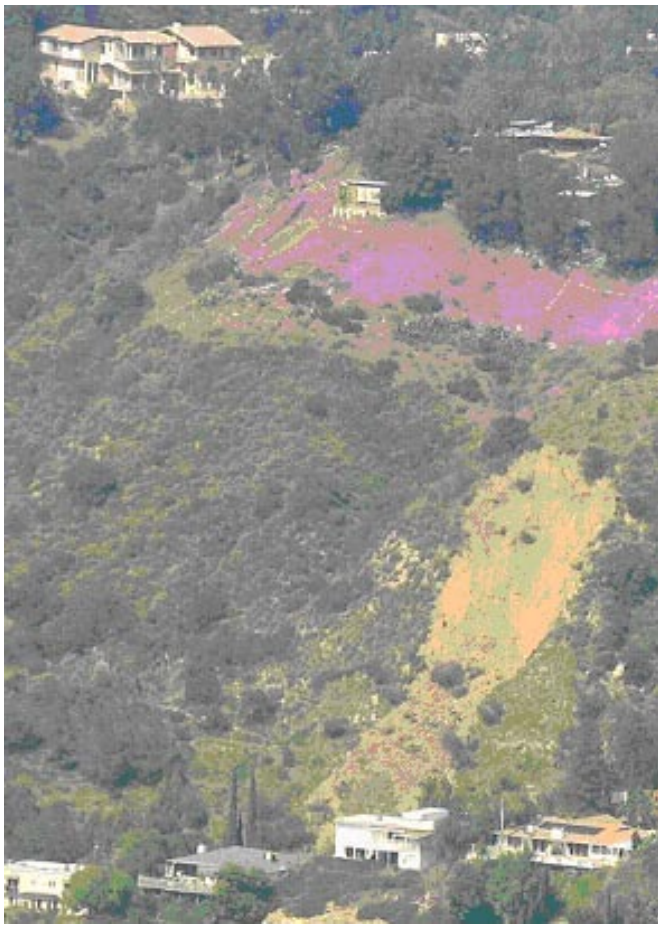
Accomplishments

Guidebook for Land-Use Planners

A major accomplishment of the Landslide Hazards Program in partnership with the American Planning Association (APA) is the completion of a practical guidebook on how to incorporate landslide hazards into the land-use planning process. The guidebook, entitled "Planning for Landslide Hazards," discusses the physical characteristics of landslides, planning and zoning tools that can be utilized to reduce potential damage, and numerous case studies of communities that have experienced and recovered from landslides. The report is available to the 30,000 members of APA and others through its Planning Advisory Service. Land-use planners have a pivotal role in reducing landslide hazards because they influence how land is used and developed, how buildings and other structures are sited, and where communities build their roads, parks, schools, and other public amenities. The destructiveness of landslides was experienced in southern California during the 2005 winter after numerous storms pounded the area, as seen in this photo of a landslide in Hollywood Hills, northwest of Los Angeles. This accomplishment relates to the End Outcome Measure: "Percentage of communities using DOI science on hazard mitigation."

Landslide Hazard Products for the Puget Sound Area

In 2005, scientists in LHP published maps and reports documenting landslide hazards and processes in the Seattle area. Topics of the maps and reports include: a Light Detecting and Ranging (LiDAR) based landslide map of Seattle; a landslide hazard map for Seattle; results of hydrologic monitoring of unstable coastal bluffs near Edmonds and Everett, WA; a landslide early warning system for these bluffs; evaluation of rainfall thresholds and estimated probabilities of landslides when the thresholds are exceeded; and protocols for issuing landslide warnings based on LHP-developed rainfall thresholds. These products have been shared with the City of Seattle and other communities in the Puget Sound area through training and personal contacts. This accomplishment relates to the End Outcome Measure: "Percentage of communities using DOI science on hazard mitigation."



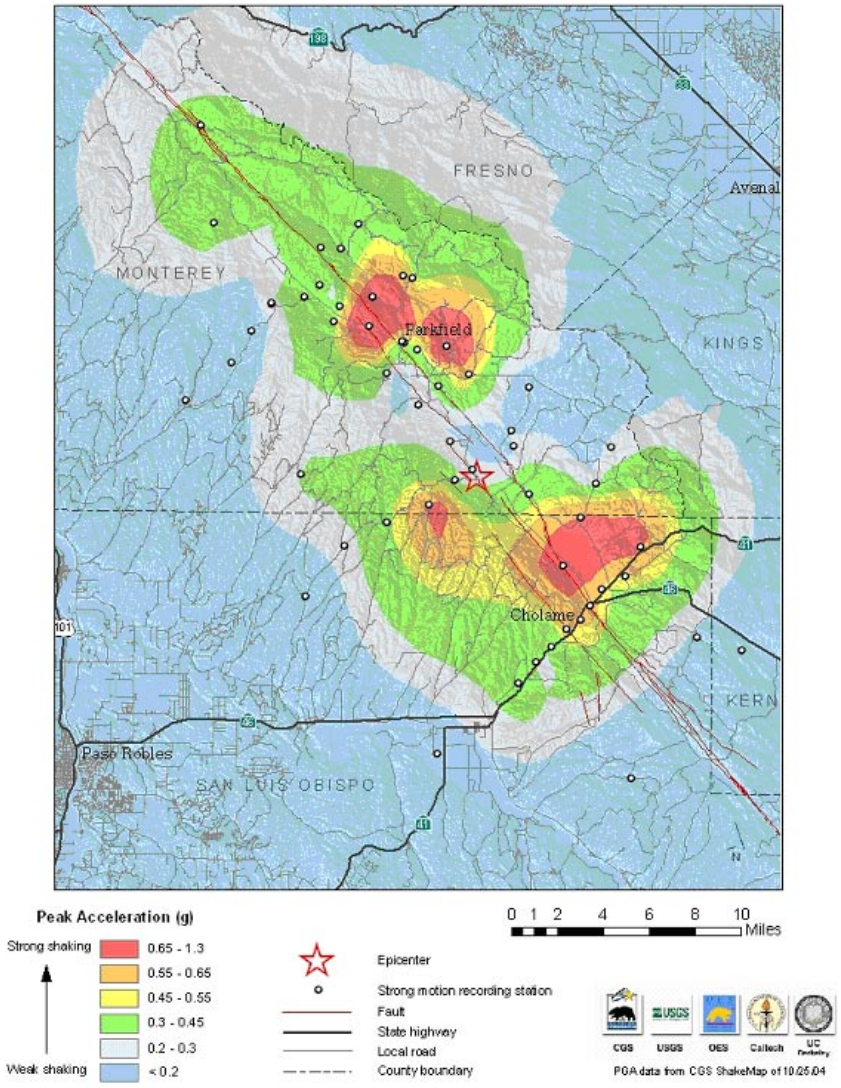
Landslide in Hollywood Hills northwest of Los Angeles, California. Photo by Jonathan Godt, USGS, LHP.

An Assessment of Volcanic Threat and Monitoring Capabilities in the United States: Framework for a National Volcano Early Warning System

USGS scientists have completed the first comprehensive assessment of the threats posed by the Nation's volcanoes. Deficiencies in monitoring were revealed by a gap analysis, which compared the current level of monitoring at each volcano to the level of monitoring required for the actual threat posed. These analyses identified high-priority targets for future monitoring investments and constituted the scientific foundation for design of a National Volcano Early Warning System, which would monitor each volcano at a level appropriate to the threat. As a next step, the USGS Volcano Hazards Program will convene workshops with stakeholders to review and refine the implementation framework, and to establish data and operational policies. This accomplishment relates to the Output Measure: "Number of systematic analyses & investigations delivered to customers (risk/hazard assessments)."

Learning from the Parkfield Earthquake

The San Andreas Fault generated a long-anticipated magnitude-6.0 earthquake near Parkfield in central California on September 28, 2004. The 2004 Parkfield earthquake is the sixth in a series of similar earthquakes that have occurred on this segment of the San Andreas Fault since the great magnitude-7.8 Fort Tejon earthquake in 1857. In anticipation of another earthquake, the USGS and the California Geological Survey installed a dense network of geophysical sensors in the mid-1980s. Those sensors caught the 2004 Parkfield earthquake in the act, making it the best-recorded major earthquake in history. No precursory changes were observed even though the epicentral region was instrumented to detect a variety of subtle precursors that might be used for short-term earthquake prediction. But during the earthquake, the dense network of seismic sensors recorded surprising near-source variations in the strong shaking that was produced (photo at right). Moreover, strong shaking decreased more rapidly with distance than predicted by models underlying current building codes. Little structural damage occurred in the rural epicentral region, but what USGS scientists and engineers have learned from Parkfield can now be applied to predicting the impacts of future earthquakes in more populated areas.

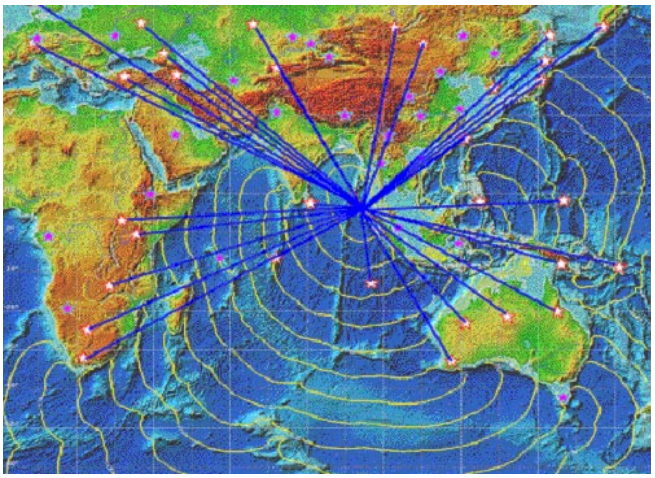


ShakeMap for the Parkfield, California earthquake of September 28, 2004. Lines running from top left to bottom right are faults of the San Andreas system, and shadings show contours of peak acceleration caused by the earthquake, as measured by strong-motion sensors (circles) installed by the California Geological Survey in cooperation with USGS. The acceleration shows considerable variation, with highest values near the two ends of the earthquake rupture. The San Andreas Fault Observatory at Depth (SAFOD) borehole site is located near the epicenter, indicated with the star. Site of a fault zone drilling and observation experiment being conducted by USGS and NSF.

Parkfield also hosts the San Andreas Fault Observatory at Depth (SAFOD) fault zone drilling and observation experiment. SAFOD is a component of EarthScope, a suite of observational systems and research that will investigate the structure and evolution of the North American continent and the physical processes controlling earthquakes and volcanic eruptions. EarthScope is funded by the National Science Foundation and conducted in partnership with the USGS. The San Andreas Fault Observatory at Depth reached a significant goal on August 2, 2005, when scientists drilled into a seismically active section of the fault approximately two miles below the surface of the Earth. Targeting a repeating micro-earthquake source at the northern end of the 2004 earthquake rupture zone, for the first time, scientists will be able to observe earthquakes up close for decades to come. When completed in 2007, SAFOD will be the only earthquake observatory with instruments installed directly within an active fault where earthquakes form or "nucleate." This accomplishment relates to the Outcome Measure "Percentage of customers for which earthquake hazards data meets their needs."

Global Seismographic Network Records The Sumatra Great Earthquake and Serves Global Tsunami Warning

On December 26, 2004, the Global Seismographic Network (GSN) recorded the arrival of seismic waves from the Sumatra-Andaman great earthquake and transmitted them to global earthquake and tsunami warning centers within 8 minutes of the earthquake. NOAA's Pacific Tsunami Warning Center (PTWC) computers automatically alerted tsunami watchstanders via pager. Within another 4 minutes, as the seismic waves continued to spread outward around the Earth, GSN data recorded on Cocos Islands, Australia, Taiwan, Mongolia, Japan, and South Korea indicated a preliminary magnitude of 8, and the PTWC watchstanders issued their initial tsunami message.



GSN map of stations used by PTWC centered on Sumatra, with wave ray paths and tsunami isochrones.

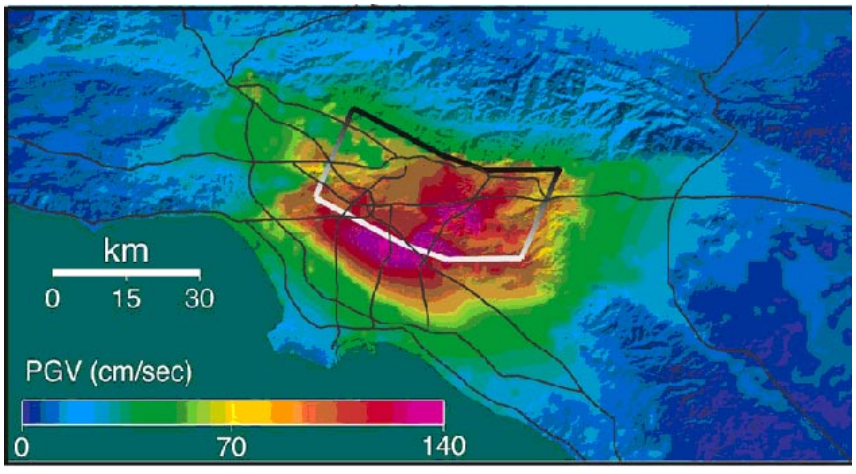
As more real-time data arrived, using 76 sites worldwide, the PWTC revised its magnitude upward to 8.5. Of these sites, 45 stations are part of the GSN, including the 20 closest to the earthquake. The data were available in real-time not only to the USGS National Earthquake Information Center and NOAA PTWC, but also to anyone with an Internet connection to the IRIS Data Management Center.

In the broad international framework, the GSN will serve as a U.S. observing system component in the Global Earth Observation System of Systems. This accomplishment relates to the End Outcome Measure "Percentage of communities using DOI science on hazard mitigation."

Scenario Earthquake Loss Estimation for Los Angeles

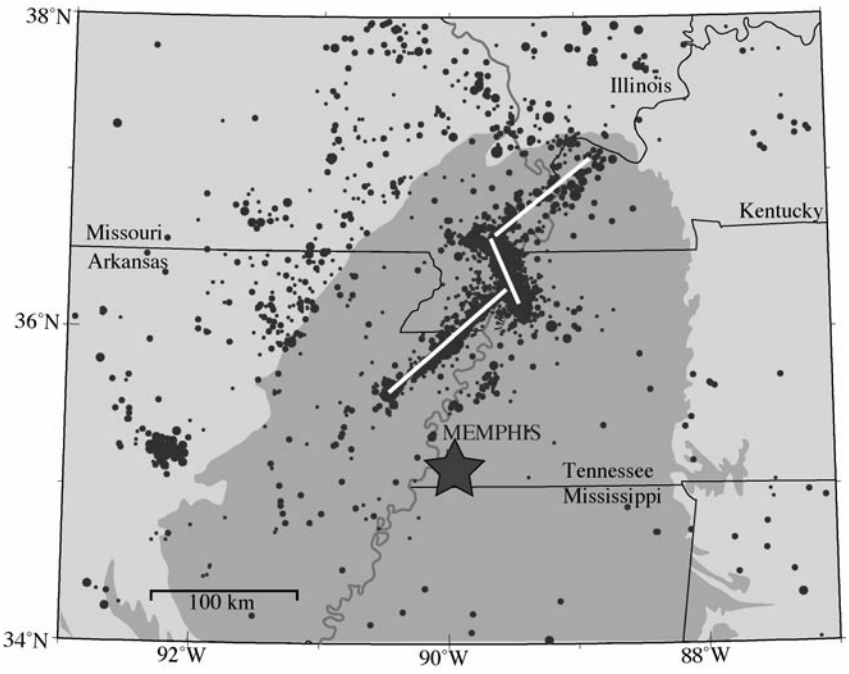
Potential earthquakes on the Puente Hills fault beneath the Los Angeles area could result in 3,000 to 18,000 fatalities, 142,000 to 735,000 displaced households, and more than $250 billion in total damages. This is according to USGS research conducted in cooperation with the Southern California Earthquake Center (SCEC), a university consortium funded by USGS and the National Science Foundation. These results, published in the May 2005 issue of the Earthquake Engineering Research Institute's Earthquake Spectra, were based on shaking scenarios created using newly available software for seismic hazard analysis developed by SCEC and the USGS, coupled with HAZUS loss-estimation software developed by FEMA.

The vast majority of losses will occur in Los Angeles County, directly over the rupture surface. Tangible losses are also predicted for San Bernardino and Orange counties located east and south of the Puente Hills fault. Losses predicted for this event are greater than those experienced during the 1994 Mw (moment magnitude) 6.7 Northridge earthquake, because of the higher potential magnitudes and the heavily shaken area during Northridge was mostly wood-frame residential structures, whereas Puente Hills sits under older and more vulnerable commercial and industrial structures.



Peak ground velocity (PGV) calculated for a simulated earthquake on the Puente Hills blind thrust fault beneath the Los Angeles urban region.

The Puente Hills blind thrust loss estimation results illustrate the rapid progress that has been made in identifying potential earthquake sources, modeling their effects, and estimating potential losses. The results also provide insight into what steps will most effectively mitigate the loss of life and the economic impacts from earthquakes. This accomplishment relates to the Outcome Measure "Percentage of customers for which earthquake hazards data meets their needs."



Map of the region surrounding Memphis. The darker area is covered by thick sediments, called the Mississippi embayment. These sediments significantly affect how the ground shakes during earthquakes. White lines indicate likely locations of major faults (buried beneath the sediments), and black dots are earthquakes recorded since the mid-1970s. These locations provide the best clues about where future earthquakes are likely to occur.

Earthquake Shaking Hazard Maps for Memphis

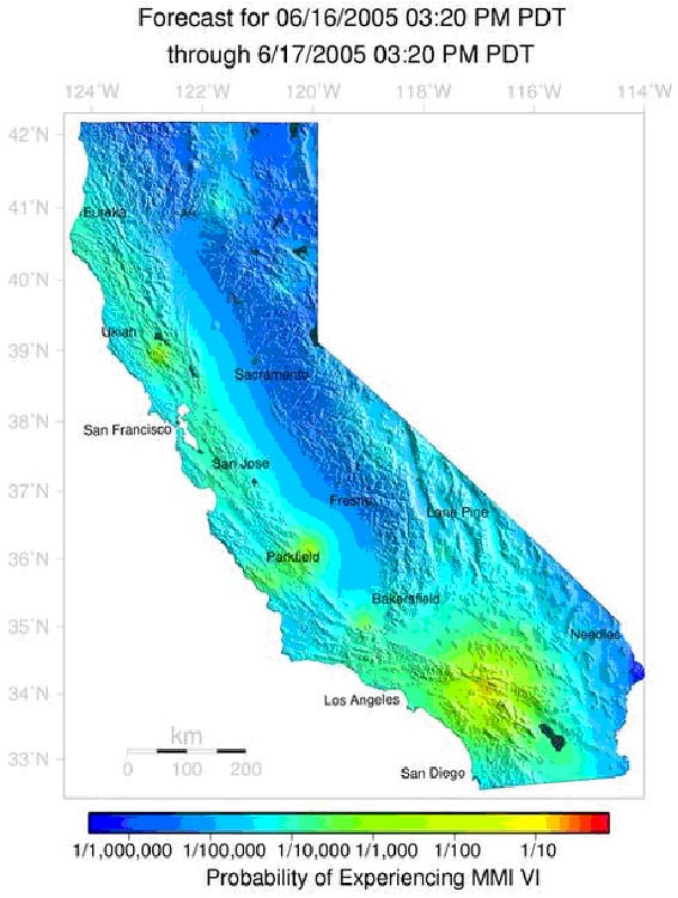
The USGS completed maps that show expected levels of ground shaking from earthquakes for much of Memphis, Tennessee, and surrounding areas (see photo at right. These maps show shaking from realistic earthquake scenarios as well as probabilistic maps that show long-term levels of shaking expected from all possible sources of earthquakes. The latter differ from the National Seismic Hazard Maps produced by the USGS Earthquake Hazards Program in two important ways: (a) they provide information at a local-community level, and (b) they include the effects of local surface geology, which has been mapped in new detail as a part of this project. While not meant for site-specific applications, the urban hazard maps will provide guidance for development of emergency response and mitigation plans, for examination of portfolios at risk, and for siting and designing of public and private facilities. The maps will also serve as educational tools, helping to raise the awareness of seismic hazard. All of the maps, as well as the data collected for their development, are available online at: http://www.ceri.memphis.edu/usgs/urban_map/memphis/index.html. Work was conducted in cooperation with State and local science and emergency management agencies, and release of the maps was accompanied by an extensive education program that included talks about urban hazard mapping given to technical and non-technical audiences, and workshops and publications on a wide range of topics related to urban hazard mapping, for both technical and lay audiences. This accomplishment relates to the Output Measure: "Number of systematic analyses & investigations delivered to customers (risk/hazard assessments), as well as End Outcome Measure "Percentage of communities using DOI science on hazard mitigation."

Short-Term Earthquake Probability (STEP)

The USGS has released new public Web pages that show the probability of earthquake shaking in the next 24 hours in California (photo on next page). These maps graphically illustrate the change in earthquake probability during aftershock and possible foreshock sequences. The maps are not intended to be used to predict an upcoming earthquake; however, based on previous earthquake sequences, an increase in probability will be seen before about half of California's larger earthquakes. The maps are updated at least once an hour and are available to the public at http://pasadena.wr.usgs.gov/step/.

The new maps represent a synthesis of current scientific knowledge about earthquakes in California, including knowledge of the faults, underlying geology, and expected rates of earthquake aftershocks. The methodology was developed by a team from the USGS and the Swiss Federal Institute of Technology in Zurich, Switzerland, with additional funding from the Southern California Earthquake Center.

In the system used to create the maps, the probability of strong earthquake shaking (with a Modified Mercalli Intensity of VI or greater, the threshold for damage) in the next 24 hours is calculated, based upon the known behavior of aftershocks and the possible shaking pattern predicted from historical patterns on the fault or in the area. The system considers all earthquakes, large and small, that are recorded by the California Integrated Seismic Network (CISN), the California element of the Advanced National Seismic System.



Short-term earthquake probability map for California, showing the probability of strong shaking in the coming 24 hours. This map, released by the USGS in May 2005, is updated hourly (see http://pasadena.wr.usgs.gov). On this June 17 map, the prominent area of bright colors in southern California shows the likelihood of strong shaking from potential aftershocks of a magnitude 5 earthquake a few hours previous.

The probability of one earthquake triggering another has been quantified and depends on magnitude, distance, and time from the triggering event. These relationships have been used to issue statements about possible aftershocks after significant earthquakes in California for the last 15 years. The innovations in the maps include information about the spatial distribution of aftershocks, how the shaking varies by location, and how the probability of earthquakes varies with time. This product was reviewed by the California Earthquake Prediction Evaluation Council, which determined that this methodology represents the state of the art in evaluation and illustration of aftershock probabilities. Implementation of these maps for other areas outside California depends upon both a robust real-time seismic network and the research to establish the average rate of aftershocks for that area. This accomplishment relates to the Outcome Measure "Percentage of customers for which earthquake hazards data meets their needs."

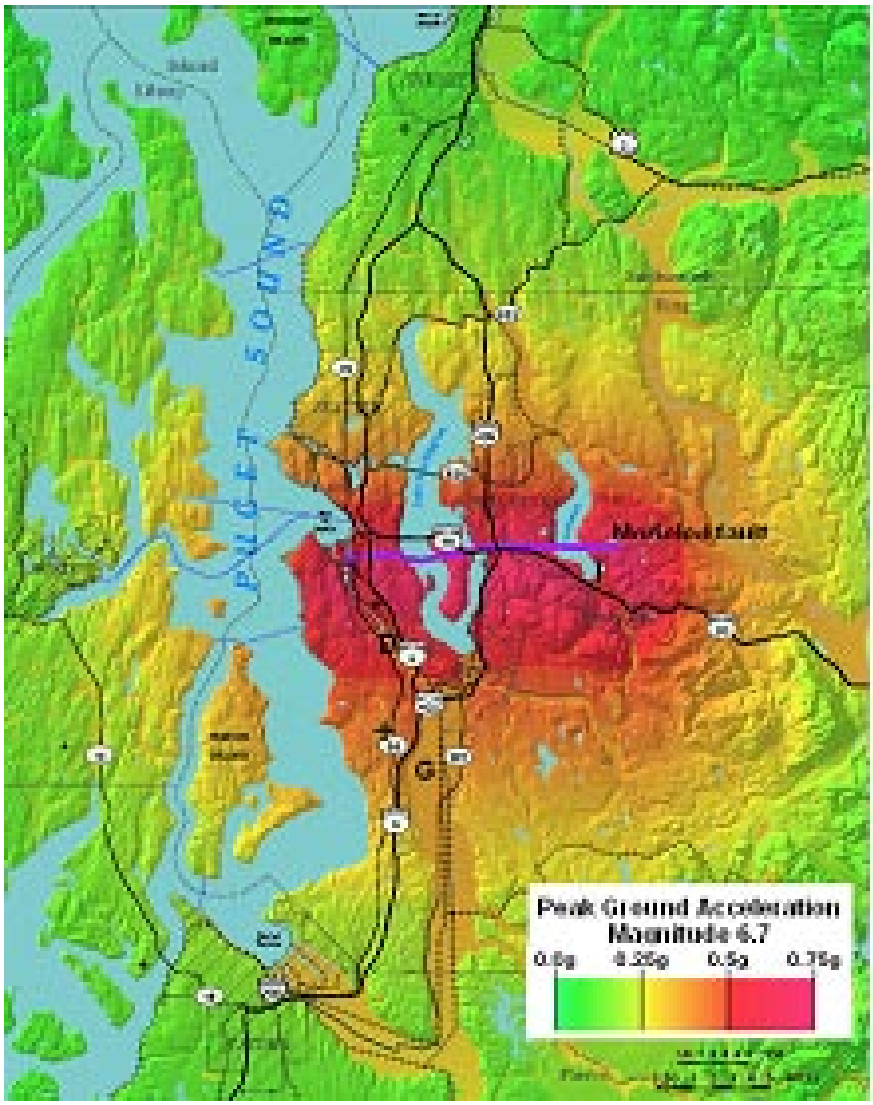
Seattle Fault Earthquake Scenario Conference

On February 28, 2005, 487 people attended an all-day conference in Bellevue, WA, to discuss the Seattle Fault Earthquake Scenario. A team of over 50 volunteers donated 5000 hours to develop the scenario. The USGS was one of eight organizations that led the overall scenario project. The workshop, held by the Cascadia Regional Earthquake Workgroup (CREW) and the USGS, outlined the effects of a magnitude-6.7 earthquake on the Seattle fault zone.

The ground motions calculated by the USGS for this event are very large and exceed 0.75g (rate of acceleration of gravity) along the 22 km fault trace used in the model (photo at right). Much of Seattle, Bellevue, and Issaquah are expected to experience ground motions in excess of 0.5g. For comparison, the 2001 Nisqually earthquake, of magnitude 6.8, produced a few very small areas in Puget Sound where accelerations exceeded 0.25g. With such predicted high accelerations in a major urban area, estimated losses are very large. Deaths are estimated at about

1,600 people, and direct damage is expected to exceed $33 billion. Indirect losses are expected to be greater than the direct losses. The scenario paints a picture of major failures in the regional highway system, and none of the potential billions of dollars in damage are included in the direct loss figure. Highway disruptions may last for 6 months or more.

The effects of the Seattle fault scenario are just being felt across western Washington. Briefings have been held for elected officials in King and Snohomish Counties as well as the City of Seattle. The Washington State Emergency Management Council is studying the scenario and expects to use the picture of damage as a call to re-start the Washington State Seismic Safety Committee. At least one city on the Seattle fault, Sammamish, has new preparedness requirements proposed before the local council.



Peak ground acceleration calculated for a 2-meter slip event on the Seattle fault. The fault breaks the surface along a 22 km zone. Peak accelerations exceed 0.7g along the fault trace and are greater than 0.5g over much of the City of Seattle, City of Bellevue, and the City of Issaquah. Heavy liquefaction is expected in the Duwamish (D) and Green River (G) valleys. The Interstate 90 East Channel Bridge is crossed by the fault; the fate of the bridge is problematic.

Following on this success, CREW and USGS have collaborated on a detailed analysis of potential great earthquakes on the Cascadia subduction zone that extends along the Pacific coast from the Brooks Peninsula on Vancouver Island to Cape Mendocino in northern California. Earthquakes of magnitude 8 to 9 have occurred there from 200 to 1,000 years apart, and the last one was on January 26, 1700. When this event repeats, the ground will shake for as long as four minutes, subjecting coastal communities to strong shaking, landslides, and tsunamis and resulting in unprecedented damage and potentially thousands of casualties. CREW, a coalition of private and public representatives, is using these findings in its work to improve the ability of Cascadia region communities to reduce the effects of earthquakes. This accomplishment relates to the Output Measure "Number of formal workshops or training provided to customers."

Serving Communities: Safeguard Lives, Property, and Assets; Advance Scientific Knowledge; and Improve the Quality of Life for the Communities We Serve

End Outcome Goal:

Advance knowledge through scientific leadership and inform decisions through the application of science.

√ Targets Met = 37	▼ Targets Not Met = 14	▲ Targets Exceeded = 20

Performance	Results				
End Outcome Measure: Advance knowledge through scientific leadership and inform decisions through the application of science					
Research: Soundness of methodology, accuracy, and reliability of science (program evaluation) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	100%	80%	100%	100%
√ Target Met.					
Inform decisions through the application of science: Improved access to needed science information (number score) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	80%	92%	90%	90%	92%
√ Target Met.					
Inform decisions through the application of science: Stakeholders reporting that information helped achieve goal (number score) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	80%	94%	93%	90%	95%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 90 percent satisfaction level (i.e. 90% or greater is the target).					
Inform decisions through the application of science: Improved access to needed science information, number of USGS science publications cataloged in master USGS publications database	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	38,000	56,086	66,626	67,000	68,945
√ Target Met.					
Inform decisions through the application of science: Improved access to needed science information, number of associated USGS science publications accessible online	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	1,000	3,533	25,909	35,000	35,869
√ Target Met.					
Inform decisions through the application of science: Improved access to needed science information (number of cumulative biological partnership links)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	27,000	32,500	36,000	38,500	76,155
▲ Target Exceeded. Primarily a result of increased node activity.					

Performance	Results				
Intermediate Outcome: Improve information base, information management, and technical assistance					
Content and expanse of knowledge base: Percentage of land with temporal and spatial monitoring, research, and assessment/data coverage to meet land-use planning and monitoring requirements (Roll-up of all components below)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	54.76%	59.76%	58.9%
√ Target Met.					

Intermediate Outcome: Improve information base, information management, and technical assistance					
Content and expanse of knowledge base: Percentage of land with temporal and spatial monitoring, research, and assessment/data coverage to meet land-use planning and monitoring requirements (number of square miles assessed by GAP analysis) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	82%	83%	83%
√ Target Met.					
Content and expanse of knowledge base: Percentage of land with temporal and spatial monitoring, research, and assessment/data coverage to meet land-use planning and monitoring requirements (NCGMP) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	2.2%	5.5%	7.3%	10.1%	10.2%
√ Target Met.					
Content and expanse of knowledge base: Percentage of proposed streamflow sites currently in operation that meet one or more Federal Needs (DOI strategic plan key measure and PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	64%	65%	64%	63%	61%
√ Target Met.					
Content and expanse of knowledge base: Percentage of land with temporal and spatial monitoring, research, and assessment/data coverage to meet land-use planning and monitoring requirements (satellite data collected over global land surface) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	100%	100%	100%
√ Target Met.					
Content and expanse of knowledge base: Percentage of land with temporal and spatial monitoring, research, and assessment/data coverage to meet land-use planning and monitoring requirements (GAM) National Land Cover dataset, 66 mapping units across country (DOI strategic plan key measure and PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	17%	45%	60%	65%
▲ Target Exceeded. Increased due to work on the Landfire program contribution to National Land Characterization Dataset.					

Performance	Results				
Content and expanse of knowledge base: Percentage of land with temporal and spatial monitoring, research, and assessment/data coverage to meet land-use planning and monitoring requirements (number of completed eco-region assessments out of 84 eco-regions) (DOI strategic plan key measure and PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	18%	31%	38%	37%
√ Target Met.					
Content and expanse of knowledge base: Average percentage of coverage for 6 data themes in The National Map in national databases at medium resolution; does not measure currentness (TNM) (DOI strategic plan key measure and PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	67%	67%	67%	70%	69%
√ Target Met.					
Content and expanse of knowledge base: Average percentage of coverage for 7 data themes in The National Map in national databases at high resolution; does not measure currentness (TNM) (DOI strategic plan key measure and PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	18%	33%	41%	54%	46%
▼ Target Not Met. Urban imagery and transportation data layers was impacted by unplanned emergency response efforts for hurricane needs and delays in transportation data from Census.					

Intermediate Outcome: Improve information base, information management, and technical assistance					
Content and expanse of knowledge base: Percentage of data accessible: Percentage of satellite data available from archive within 24 hours of capture (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	99%	95%	90%	90%	97.2%
▲ Target Exceeded. Due to upgrades of computer equipment on the archive silo.					
Quality: Percentage of studies validated through appropriate peer review or independent review (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	100%	100%	100%	100%
√ Target Met.					
Access: For information products surveyed, percentage of mapping, water, and biology customers that are satisfied with ease and timeliness of access	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	91%	92%	90%	≥ 80%	92%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 80 percent satisfaction level (i.e. 80% or greater is the target).					
Access: Customer satisfaction (number score) with ease and timeliness of delivery of science support services	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	81%	81%	82%	≥ 70%	84%
√ Target Met.					

Performance	Results				
Ease of use: Customer satisfaction (number score) with documentation and ease of usability of science support services	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	81%	81%	74%	≥ 70%	86%
▲ Target Exceeded. A different set of products is sampled each year, one year's aggregate measurement is not directly linked to the previous year. The intent is to maintain at least an 70 percent satisfaction level (i.e. 70% or greater is the target).					
Facilities Condition: Facilities are in fair-to-good condition as measured by the Facilities Condition Index (FCI) (DOI strategic plan key measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	.17	.17	.17
√ Target Met.					
Learning Approach: Percentage of instructor proficiencies in select subject areas, GIS and Earth Science	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	20%	30%	30%	30%
√ Target Met.					
Percentage of time that all WAN and Internet access locations are up and running and accessible	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	95%	99.8%	99.7%	99%	99.27%
√ Target Met.					
Online transactions: Increase online transactions to a percentage relative to baseline inventory of all USGS transactional services	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	51%	58%	80%	81%
√ Target Met.					
IT Investment: Percentage of major IT investment projects for which cost estimates, established in project or contract agreement, meet actual costs with a variance of 5 percent	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	100%	100%	100%	100%	100%
√ Target Met.					
Performance Outputs:					
Number of annual gigabytes collected (Geography)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	34,815	62,622	6,023
▼ Target Not Met. Due to delays in completing imagery partnerships and the processing of urban imagery and boundary data due to priority response activities to Hurricane Katrina.					
Intermediate Outcome: Improve information base, information management, and technical assistance					
Number of cumulative gigabytes managed (Geography)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	51,042	85,857	148,479	108,035
▼ Target Not Met. Due to delays in completing imagery partnerships and the processing of urban imagery and boundary data due to priority response activities to Hurricane Katrina.					

Performance	Results				
Number of annual terabytes collected (Geography)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	527.2	527.2	438.8
▼ Target Not Met. Received less data due to NASA's ability to deliver to EROS Data Center.					
Number of cumulative terabytes managed (Geography)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	1,921.1	2,448.3	2,975.8	2,887.4
√ Target Met.					
Number of annual gigabytes collected (Geology)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	407.2	210.8	117.8
▼ Target Not Met. State Geological Surveys did not submit as much information as anticipated, and some needed unexpected time in cleaning up data before entering in the database.					
Number of cumulative gigabytes managed (Geology)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	491	898.2	1,109	1,016
▼ Target Not Met. State Geological Surveys did not submit as much information as anticipated, and some needed unexpected time in cleaning up data before entering in the database.					
Number of cumulative gigabytes managed (Biology)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	389	400	360	380	791.25
▲ Target Exceeded. Large portion of increase due to GAP data being moved to Center for Biological Informatics servers from University of Idaho.					
Number of systematic analyses and investigations delivered to customers	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	588	573	571	557	576
√ Target Met.					
Number of formal workshops or training provided to customers	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	22	61	107	104	131
▲ Target Exceeded. As the National Hydrography Dataset has been built out over the country during 2005, State and local agencies have been very interested in their newly published datasets and have asked for additional workshops and training. USGS had opportunities for additional geospatial workshops in Colorado and California.					
Number of real-time streamgages reporting in NWIS Web (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	5,626	5,621	5,978	5,187	6,246
▲ Target Exceeded. An error was found when determining the FY2005 Final Plan target. It has been corrected in FY2006.					

Performance	Results				
Number of real-time ground-water sites reporting in NWIS Web	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	697	779	700	796
▲ Target Exceeded. Additional reimbursable funding results in exceeding the target.					
Number of real-time water-quality sites reporting in NWIS Web	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	891	1,062	900	1,125
▲ Target Exceeded. Additional reimbursable funding results in exceeding the target.					

Intermediate Outcome: Improve information base, information management, and technical assistance					
Percentage of river basins that have streamflow stations (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	77%	79%	82%
√ Target Met.					
Percentage of streamflow stations with real-time measurement/reporting of water quality (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	6%	7%	7%
√ Target Met.					
Percentage of daily streamflow measurement sites with data that are converted from provisional to final status within 4 months of day of collection (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	0 baseline	10%	10%
√ Target Met.					
Percentage of USGS streamflow stations with 30 or more years of record (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	60%	61%	58%
√ Target Met.					
Percentage of ground-water stations that have real-time reporting capability in the ground-water climate response network (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	57%	62%	67%
▲ Target Exceeded. The Climate Response Network wells receive direct Federal funding and reimbursable dollars. USGS encourages the addition of Coop wells that meet the network criteria, regardless of the frequency of measurement.					
Percentage of the Nation's 65 principal aquifers with monitoring wells used to measure responses of water levels to drought and climatic variations to provide information needed for water-supply decisionmaking (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	60%	61%	61%
√ Target Met.					

Performance	Results				
Percentage of U.S. with ground-water quality status and trends information to support management decisions (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	0	39%	39%
√ Target was rebaselined in FY05 to incorporate prior years (2002 and 2003). OMB has approved the change.					
Percentage of States with Web-based streamflow statistic tools to support water management decisions (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	4%	11%	10%
√ Target Met.					
Percentage of U.S. ground-water availability status and trends information to support resource management decisions (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	5%	7%	7%
√ Target Met.					
Percentage of targeted contaminants for which methods are developed to assess potential environmental and human health significance (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	10%	20%	20%
√ Target Met.					
Intermediate Outcome: Improve information base, information management, and technical assistance					
Average cost per analytical result, adjusted for inflation, is stable or declining over a 5-year period (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	$8.64	$8.64	$8.63
√ Target Met.					
Percentage improvement in accuracy of watershed (SPARROW) model prediction for total nitrogen and total phosphorus (measured as reduced error) (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	40%	36%	31%
▲ Target Exceeded. Lowered error from 40% in FY2004 to 31% in FY2005. Refinement of the SPARROW model yielded better than expected model performance.					
Number of mapping nodes (publicly available Web mapping services available through *The National Map*)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	25	50	90	140	152
▲ Target Exceeded. Through *The National Map*, State and local governments provided more web mapping services than anticipated at the start of the year.					
Number of partnerships formed to link scientific information and societal decisions (Science Impact)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	n/a	3 (cum 9)	8
▼ Target Not Met. Did not finalize the partnership with Pacific Disaster Center.					

Performance	Results				
Number of partnerships for *The National Map* built with State and local governments that collect and maintain higher resolution, more current data (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	10	30	28	35
▲ Target Exceeded. State and local governments presented greater opportunities for partnering than USGS had expected.					
Number of data standards used in implementing *The National Map* (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	12	17	17	22	22
√ Target Met.					
Percent of the Nation's surface for which hydrography, elevation, and orthoimagery data are available through the National Spatial Data Infrastructure Clearinghouse and supported through partnerships (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	.8%	41%	62%	83%	71%
▼ Target Not Met. Urban orthoimagery data layer was impacted by unplanned emergency response efforts for hurricane needs - rate is expected to accelerate once new Gulf coast States' imagery is ready to put into the NSDI Clearinghouse.					
Percentage of total cost saved through partnering for data collection of high-resolution imagery (PART measure)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	71%	42%	72%
▲ Target Exceeded. Total of 49 urban areas for $3,108,880 versus full price acquisition estimated at $11,103,143.					
Number of summer workshops provided to instructors of Tribal Colleges & Universities instructors	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	1	2	4	2	2
√ Target Met.					
Number of academic year short courses and mini-workshops provided to Tribal Colleges & Universities	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	7	9	8	8	9
√ Target Met.					
Number of summer internships	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	1	4	5	5	7
√ Target Met.					

Performance	Results				
Intermediate Outcome: Improve information base, information management, and technical assistance					
Number of academic year internships	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	2	3	3	4	5
▲ Target Exceeded.					
Number of bureau-conditional assessments in progress or completed (within a 5-year cycle)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2004 Actual
	25	39	41	9	9
√ Target Met.					
Number of deferred maintenance and capital improvements completed (cumulative)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	14	24	36	54	53
√ Target Met.					
Number of bureauwide data-integration practices and/or policies adopted	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	1	3	4
▲ Target Exceeded.					
Number of new NSDI Clearinghouse nodes established for serving data	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	41	41	82	50	43
▼ Target Not Met. Transitioning to fewer nodes and greater focus on GOS portal.					
Number of informal NSDI conference outreach exhibits	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	58	52	52	50	56
▲ Target Exceeded.					
Number of new NSDI standards developed (cumulative)	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	2	2	0	5	2
▼ Target Not Met. Homeland Security Working Group Access Policy.					
Number of new NSDI partnership agreements	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	29	51	52	60	36
▼ Target Not Met. The number of grant applicants in FY2005 was lower than previous years and some of the proposals were of poorer quality. As a result, dollar limits were increased in some categories to allow some of the better proposals to have higher awards. Overall the total dollar amount of the grant program remained constant but a smaller quantity of grants were awarded this year.					

Performance	Results				
Number of significant Web sites co-located on consolidated hardened, secure, and redundant Internet servers	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	17	61	167	200	189
▼ Target Not Met.					
Number of IT help desks operational in major USGS offices	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	8	5	4	5
▼ Target Not Met. Reduction of help desks fell short of planned target by 1 help desk as a result of FY2005 changes in the strategy and planning for future consolidation expected to occur in FY2006.					
Percentage of Internet hosts potentially vulnerable to unauthorized access	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	n/a	n/a	5%	<1%	2.01%
▼ Target Not Met. The FY2005 rate was higher than expected due to the volume of patches created to remediate unforeseen new vulnerabilities.					

Intermediate Outcome: Improve information base, information management, and technical assistance					
Number of NBII nodes	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	10	10	14	14	14
√ Target Met.					
Number of NBII Clearinghouse metadata records	2002 Actual	2003 Actual	2004 Actual	2005 Planned	2005 Actual
	4,000	6,600	7,500	8,000	17,937
▲ Target Exceeded. Additional NBII nodes as well as other partners have added metadata records to the NBII Clearinghouse far in excess of anticipated levels.					

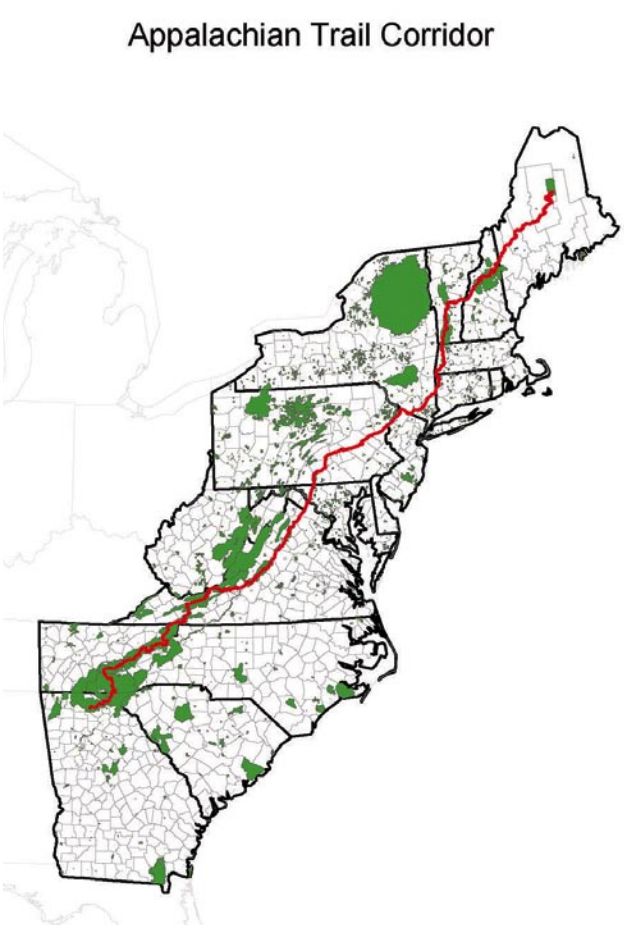
Accomplishments

Building an NBII Portal Community for Appalachian Trail Environmental Inventory and Monitoring

The Appalachian Trail (AT), one of the most recognized trails in the world , traverses 14 States, 8 national forests, 5 national park units, and several State forests and parks. NPS, FWS, USFS-Forest Health Monitoring, Appalachian Trail Conservancy (ATC), Southern Appalachian Highlands Conservancy (SAHC), Appalachian Mountain Club (AMC), Southern Appalachian Man and the Biosphere (SAMAB), Appalachian Voices, West Virginia Highlands Conservancy, and Delaware Highlands Conservancy conduct localized natural resource inventory and monitoring (I&M) activities along the AT corridor.

The NBII portal's AT community serves as a central point of coordination and collaboration for many of these efforts (membership has grown to 109 individuals since June of last year) with the community now being used to manage five projects along the AT corridor.

For instance, it is being used to post announcements, post and edit documents, post and track progress of work tasks, conduct discussions on issues, plan meetings and conference calls, coordinate metadata documentation for projects, and document links of interest for land managers. It also provides information on conferences and news items of interest, including forest health monitoring, adaptive management of the Roan Mountain Massif, invasive species issues, documenting inventory and monitoring activity, and researching additional topics for I&M. Further, the AT community has raised awareness of the NBII program at the park and forest level, at universities, and Federal agencies. This accomplishment relates to the Output Measures: "Number of cumulative NBII Clearinghouse metadata records," and "Number of cumulative Biology gigabytes managed," as well as End Outcome Measure "Number of cumulative Biology partnership links."



Appalachian Trail.

New and Improved NBII Portal Introduced

Early FY2005 marked the introduction of a new and improved NBII portal (My.NBII.Gov). The NBII portal provides access to biological information and services and helps support the biological research process. Through a single, Web-accessible interface, NBII partners, scientists, and staff use the portal to collaborate on a wide range of questions related to the management, use, and conservation of biological resources.

As an information-sharing tool, the portal streamlines and enhances collaboration and project management. The recently upgraded portal offers improved capabilities through software enhancements, including "live" editing of documents, immediate notification of new information, and enhanced searching capabilities. The new portal also boasts better project and document management, allowing users to upload multiple files at once, create new information without leaving the portal, and export entire project timelines and tasks directly into Microsoft Project.

Now, more than ever, the portal helps the NBII serve communities through improved management of our Nation's biological resources; at the same time, designated groups within the portal itself (also termed "communities") address a variety of specialized tasks and experience dynamic interaction with their colleagues. Behind the scenes, the security architecture for the upgraded portal is more flexible, giving greater autonomy to community managers and allowing them to tailor their communities and create content that best reflects user needs. Today, NBII portal communities cover topics from biodiversity in the Appalachian Mountains to information on threatened and endangered species on U.S. military lands. This accomplishment relates to the Output Measures "Number of cumulative NBII Clearinghouse metadata records," and "Number of cumulative Biology gigabytes managed," as well as End Outcome Measure "Number of cumulative Biology partnership links."

Stream-Sediment Geochemistry in Coeur D'Alene Mining District

USGS scientists recently completed an integrated watershed-characterization study finding that historical mining of silver-lead-zinc ores have resulted in streambed sediment enrichments of lead, zinc, mercury, arsenic, cadmium, silver, copper, and cobalt in tributaries of the North Fork of the Coeur d'Alene River, ID. The study results have been published in the new USGS Scientific Investigations Report, *Stream-Sediment Geochemistry in Mining-Impacted Streams: Prichard, Eagle, and Beaver Creeks, Northern Coeur d'Alene Mining District, Northern Idaho.*

Coeur d'Alene, Idaho.

The report, produced in cooperation with the USFS and the BLM, concludes that there are elevated levels of lead and zinc that are far above the normal background levels, in the vicinity of mines and mill sites, decreasing at the mouth of each stream where it empties into the North Fork of the Coeur d'Alene River, 15–20 kilometers downstream. The USFS and BLM are using this baseline data to monitor and gage future reductions in streambed sediment metal enrichments that should result from ongoing remedial actions being taken at several of the mines and mill sites in the drainage basin. See http://pubs.usgs.gov/sir/2004/5284/. This accomplishment relates to the Output Measure "Number of systematic analyses & investigations delivered to customers."

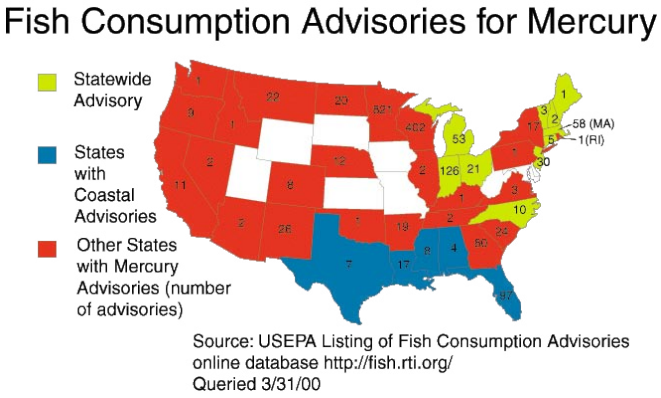
Pesticides in Water

A cooperative study by USGS and EPA of 12 water treatment plants scattered throughout the country found that some pesticides are not completely removed by the treatment process and can remain in treated drinking water. Four herbicides—atrazine, metolachlor, prometon, and simazine—were detected most frequently. None of the treated samples contained pesticide concentrations exceeding EPA standards for safe drinking water, although scientists consistently found detectable levels of several pesticides.

The study showed that there is considerable variability among treatment plants in their effectiveness in removing pesticides. The paper will be published in the *Journal of the American Water Works Association*. This accomplishment relates to the Output Measure "Number of systematic analyses & investigations delivered to customers."

National Fish Mercury Model Available On-Line

Many Federal, State, and other agencies monitor mercury levels in fish samples to identify streams and lakes susceptible to mercury contamination in fish, to assess trends over time, to determine the factors that make waterways susceptible to contamination, and to develop fish consumption advisories for mercury. These agencies face formidable challenges in interpreting data on mercury concentrations in fish tissue because important spatial and temporal trends in these data are often obscured by variations in fish sample characteristics—different fish species, fish of different sizes, and different parts of fish (whole fish or fish fillet tissue).



EPA Listing of Fish Consumption Advisories for Mercury data by state.

To help resource managers with this problem, USGS scientists developed a national model of mercury concentrations in fish tissue. This statistical model can be used to analyze monitoring data and to predict mercury concentrations in single fish species, in a specified size of fish, or in a type of fish tissue based on monitoring data. By accounting for differences in sample characteristics, the statistical model can reveal variations in fish-mercury concentrations between sites and over time that otherwise might go unnoticed.

Additionally, the model can estimate mercury concentrations in many fish with very different characteristics, thus providing the potential to dramatically lower the number of fish samples needed for analysis (and therefore lowering sampling costs) without decreasing accuracy.

An example of an application of the model would be to predict the size and type of fish that will bioaccumulate mercury beyond a specific mercury concentration. The model is calibrated to a national data set of mercury in fish tissue (as of February 2005, there were 45,605 samples) compiled from various Federal, State, and local data sets including the National Listing of Fish and Wildlife Advisory data set. The model is available online and was developed in cooperation with the National Institute of Environmental Health Sciences and *The National Map* Program. This accomplishment relates to the Output Measure "Number of systematic analyses & investigations delivered to customers."

Department of Defense Threatened and Endangered Species Research Documents Library

Through the implementation of metadata standards and NBII portal technologies, the NBII program is providing the core infrastructure to support efforts to manage threatened and endangered species (TES) information for five species: Indiana bat, golden-cheeked warbler, black-capped vireo (see photo at right), gopher tortoise, and red-cockaded woodpecker.

The NBII program is not only responsible for developing and housing the database and information repository to support this effort, but also provides access to additional data and information relevant to Department of Defense (DoD) TES issues such as black-capped vireo at Fort Hood, TX, and red cockaded woodpecker in the Southern Appalachian region. The DOD TES Research Documents Library project initially focused on U.S Army high-priority TES species of concern, and a subset of TES related documents (management plans, biological opinions, and fact sheets). Users include military land managers and other partners. This accomplishment relates to the Output Measures "Number of cumulative NBII Clearinghouse metadata records," and "Number of cumulative Biology gigabytes managed."

Black-capped Vireo (vireo catricapalla).

New Glen Canyon Dam High-Flows Web Site

A new USGS Web site containing news articles and information about the November 2004 Glen Canyon Dam experimental high-flow event through the Grand Canyon was launched in FY2005. The results of the experimental high-flow event and other similar efforts can be used to evaluate the use of high flows as a management action for the preservation and restoration of natural resources in the Colorado River below Glen Canyon Dam. These investigations also contribute substantially to our understanding of the effect of high flows on natural resources so that we may better understand the relationship between the operations of the Glen Canyon Dam and the natural environment. In addition to news articles, the new Web site contains links to press releases, radio interviews, descriptions of science experiments, compliance documents, and more. The site contains links to more than 75 news articles describing the high flow events. See http://www.gcmrc.gov/what_we_do/high_flow/high_flow.htm/. This work is a collaborative effort involving the Biological Resources Division

and the Hydrologic Research and Development Program. This accomplishment relates indirectly to the Output Measure "Number of systematic analyses & investigations delivered to customers."

Water-Quality Data Online for New York Estuary

Improving the health of Long Island's South Shore Estuary Reserve (SSER) requires continuously recorded water-quality data to understand the short-term effects of stormwater runoff and other pollution sources.

In a pilot effort to document the daily and tidal variability of water quality in the SSER, the USGS began monitoring chemical parameters at its station on Reynolds Channel at Point Lookout, in cooperation with the New York State Department of Environmental Conservation and the Town of Hempstead Department of Conservation and Waterways. This station, which records tide elevation and meteorological conditions every 6 minutes, also monitors water temperature, specific conductance, salinity, dissolved oxygen, and turbidity. The availability of these data will make it easier for New York State and local managers to understand the impact of runoff from storms in the region, as well as the impact of pollution runoff. Real-time data from this site are available at http://waterdata.usgs.gov/ny/nwis/uv/?site_no=01310740. This accomplishment relates to the Output Measure "Number of real-time water-quality sites reporting on NWIS-Web."

Long Island South Shore Estuary Reserve.

DOI Land Cover Summit

The USGS hosted a two-day DOI Land Cover Summit on January 26-27, 2005, to promote the integration of land cover activities across the Department. Land cover mapping, characterization, monitoring and forecasting are critical elements of many environmental monitoring programs in Federal, State, and local governments, industry, academia, as well as other non governmental sectors. For DOI, such programs include fire science activities, NPS high-resolution vegetation mapping, FWS refuge mapping, and the BLM Land Health Standards. The Summit provided a means for coordination among DOI agencies to improve the integration of plot data collection, translation and use; quantification of landscape characteristics (percentages of canopy cover and impervious surface, Normalized Difference Vegetation Index) to complement land cover classification mapping; satellite data availability; multistage sampling schemes; status and trends reporting; and algorithms and processes for achieving dynamic land cover products. This accomplishment relates to the Output Measure "Number of formal workshops or training provided to customers."

Shuttle Radar Topography Mission Data Validation and Applications Workshop

The Shuttle Radar Topography Mission (SRTM) has produced an unprecedented near-global high-resolution elevation dataset. Since the Shuttle flight, the mapping community has eagerly anticipated the availability of this new source of basic topographic information. All SRTM data production has been completed, and the data are being used in numerous applications. Under an agreement with the NASA and National Geospatial-Intelligence Agency, the USGS distributes this elevation data through a Web-ordering interface or through the USGS EROS Seamless Data Distribution System. The USGS has been distributing over 3 terabytes of data per month for the past year.

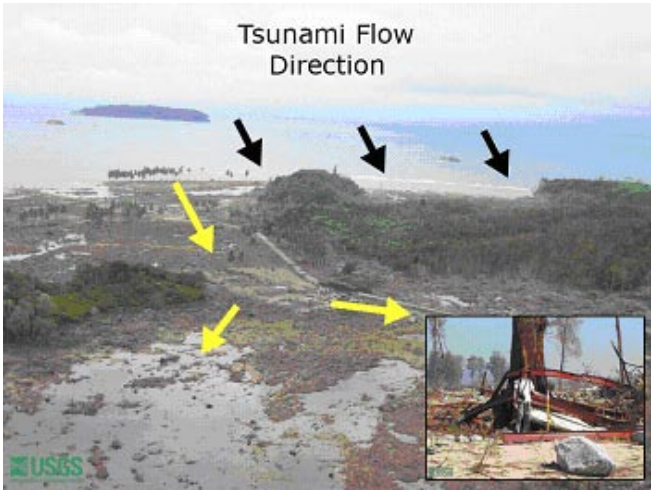
On June 14-16, 2005, the USGS hosted a Shuttle Radar Topography Mission - Data Validation and Applications Workshop in Reston, VA. Approximately 180 participants from 14 countries attended this international workshop, cosponsored by NASA, USGS, NGA, the Committee on Earth Observation Satellites, and the International Society for Photogrammetry

and Remote Sensing. The purpose of the workshop was to help document the SRTM data quality and characteristics and to describe applications benefiting from the data. There were over 40 oral presentations and 20 posters on topics including data production, accuracy assessment, comparison of radar products, canopy height and vegetation mapping, void filling, data distribution, and earth science and geospatial applications. The technical program concluded with a panel discussion on the future of topographic mapping from space. This accomplishment relates to the Output Measure "Number of formal workshops or training provided to customers."

Post Tsunami Work

In response to the December 2004 tsunami disaster, USGS scientists led or participated in International Survey Team expeditions to Sumatra, Sri Lanka, and the Maldives. Hardest hit were Sumatra (death toll greater than 170,000) and Sri Lanka (death toll greater than 31,000).

The USGS and the Mines Bureau of Sri Lanka were the first scientific agencies to mobilize field responses to the tsunami. USGS provided critical sedimentologic and geologic expertise to the international teams. Teams surveyed the east, south, and west coasts of Sri Lanka and the Aceh province in Sumatra, where they collected critical and ephemeral information on tsunami inundation, erosion and deposition, nearshore bathymetry, and coastal change impacts.



Sumatra: Black arrows indicate tsunami flow direction as the waves hit the shore; then where the waves were forced inland past barriers the flow became focused and wrapped around in back of these barriers.

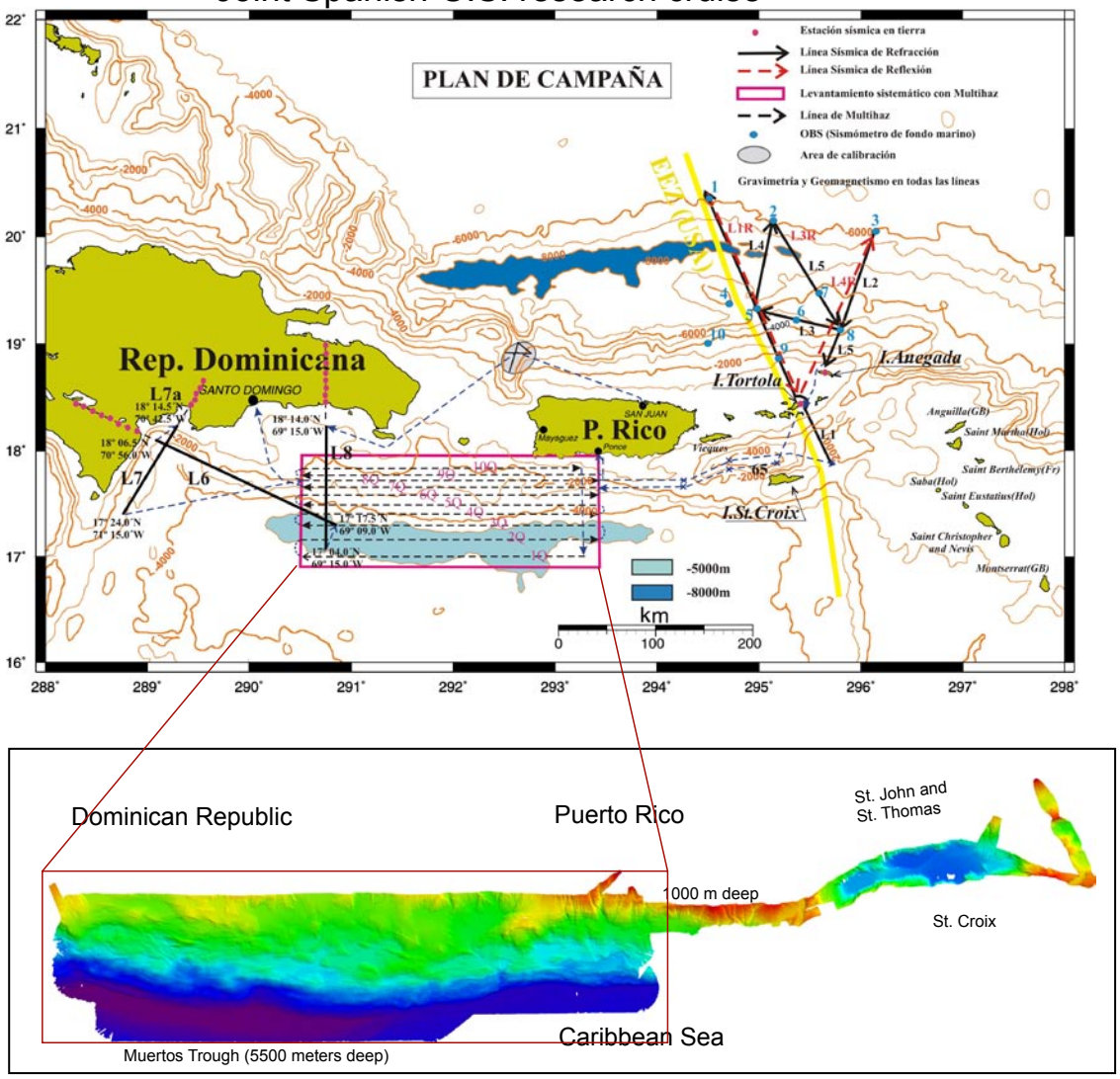
On Indonesia's island of Sumatra, USGS scientists documented wave heights of 20 to 30 m (65 to 100 ft) at the island's northwest end and found evidence suggesting that wave heights ranged from 15 to 30 m (50 to 100 ft) along a 100-km (60 mi) stretch of the northwest coast. These wave heights are higher than those predicted by computer models made soon after the earthquake that triggered the tsunami. These data on the height and variability of tsunami waves will provide critical field validation for improved tsunami models.

In the Maldives, USGS surveys provided an assessment of tsunami impacts, and USGS researchers developed requirements for setting up a coastal zone management system to guide reconstruction efforts. The primary goal of these response teams was to provide scientific and technical expertise to support improvements in hazard mitigation and coastal planning. The secondary goal was to "groundtruth" predictive models used to forecast tsunamis for early warning systems. Tsunami models and other related information were developed and posted on the Web (http://walrus.wr.usgs.gov/tsunami/) to aid response planning, define future vulnerability, and inform the public. The users of this information include first responders to disasters in the local areas, local and countrywide disaster planners, Federal agencies, and scientists. This accomplishment relates to the Output Measure "Number of systematic analyses & investigations delivered to customers."

Caribbean Tsunami Hazard

A survey to map tsunami and earthquake hazards in the northern Caribbean was completed in April 2005 aboard the Spanish research vessel *Hesperides* and aboard the Puerto Rican commercial tugboat *Kruger B.* The project was conducted jointly with the USGS Woods Hole Science Center, the University of Madrid, the Spanish Royal Naval Observatory, and the seismic network of the University of Puerto Rico. It included detailed mapping of 24,000 km² south and southwest of Puerto Rico, an area thought to accommodate movement of the Caribbean Plate under Puerto Rico. The area has not previously been mapped, thus the potential for tectonic and landslide activity there is largely unknown. These data will be used by scientists and managers to help plan and expand the Caribbean

Joint Spanish-U.S. research cruise



Preliminary sea floor topography map south of Puerto Rico and the Virgin Islands

Joint Spanish-U.S. Research Cruise.

tsunami warning system. This accomplishment relates to the Output Measure "Number of systematic analyses & investigations delivered to customers."

The Road Indicator Project (TRIP)

The USGS has developed a national, high-resolution dataset that gives the distance to the nearest road every 30 meters across the conterminous 48 states. This work provides the first unified national picture of roadless space, vehicular accessibility, and intensity of road construction.

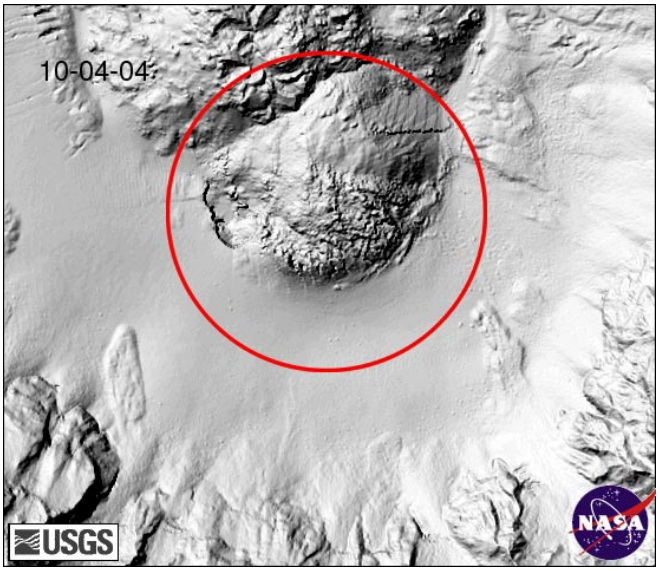
The new dataset is the first member of the National Overview Road Metrics family of road-related indicators. The U.S. road network is the largest human construction on Earth. It is vital to our economic and social development and has been rarely studied as an integrated object. Spatial relationships between the network and intervening roadless areas are important to ecological and hydrological resources. The road indicators provide mechanisms for quantitative study, synthesis to large scale, indication of temporal change, and place-to-place comparison. There have been no

national road-related indicators; TRIP provides these and applies them to provide multiple-scale information about conditions and processes influenced by roads.

USGS has developed a video showing the deflation of open space in the growing urban corridor along the Front Range. This video illustrates how an indicator metric can be used to integrate trends information over a large area and simultaneously display spatial detail. This accomplishment relates to the Output Measure "Number of systematic analyses and investigations delivered to customers."

Mt. St. Helens LiDAR

USGS produced a digital elevation model of Mount St. Helens using a high-resolution LiDAR (light detection and ranging) dataset, acquired in September 2003. The DEM of Mount St. Helens was selected for the cover story of the January 2005 issue of *Photogrammetric Engineering and Remote Sensing,* describing USGS research activities using LiDAR. The LiDAR data provided the first high-resolution elevation data set of Mount St. Helens since the eruption in May 1980. The release of the data coincided with the latest small-scale eruptions and enabled USGS researchers to monitor the growth of the crater's lava dome.



LIDAR Image of Mount St. Helens, Washington: Vertical view of new dome area Mount St. Helens crater, October 4, 2004.

Topographic changes between the 2003 survey and a second LIDAR survey in October 2004 are being used to document volcano deformation with LiDAR for the first time. This accomplishment relates to the Output Measure "Number of systematic analyses and investigations delivered to customers."

Canadian Partnership

The USGS and the Geological Survey of Canada are conducting research into community planning for multiple natural hazards along the Sea-to-Sky corridor in anticipation of population increases and the upcoming Winter Olympics. The Sea-to Sky corridor is located in British Columbia from Horseshoe Bay and extending north to Whistler. It is one of the most spectacular settings in the world offering travelers along Highway 99 North an uninterrupted vista of Howe Sound, year-round glaciers and breath-taking West Coast mountain scenery.

USGS and GSC also jointly produced a paper on developing methods to estimate the economic value of improved geologic maps for mineral exploration in mature and frontier mining districts. This accomplishment relates to the Output Measure: "Number of partnerships formed with decisionmaking organizations."

USGS Natural Disaster Coordination Support

The USGS freely distributes many types of satellite imagery and geospatial data and works with commercial satellite data providers to support the needs of U.S. Federal agencies. In response to relief efforts to nations impacted by the Asian tsunami disaster of December 26, 2004, USGS staff at EROS worked virtually non-stop to maintain and add data to the USGS Web site for the Hazards Data Distribution System (http://gisdata.usgs.gov/website/Disaster_Response). The Web site provides a dynamic online map interface that can be used to view USGS datasets that are part of *The National Map*.

USGS posted a host of geospatial data and satellite imagery for free electronic downloading from this site that included topographic and other types of maps; commercial, civil, and international imagery; inundation shape files; Landscan data; and elevation data in response to the disaster. These data were

made available to U.S. Government organizations such as Department of State, U.S. Agency for International Development, National Oceanic and Atmospheric Administration, U.S. Department of Agriculture, NASA, U.S. Army Corps of Engineers, National Geospatial-Intelligence Administration, USGS, and relief organizations. Other organizations include the U.N. Office for the Coordination of Humanitarian Affairs, Government of India, Pacific Disaster Center, German Aerospace Center, World Food Program, French national space agency (CNES) and French mapping agency (SERTIT), UNOSAT, the International Water Management Institute, International Charter: Space and Major Disasters, EURIMAGE, and European Organization for Nuclear Research.

Within hours after the disaster, EROS began providing relief organizations worldwide with pre- and post-tsunami satellite images, as well as image-derived products that incorporate information on population density, elevation, and other relevant topics. The images and image-derived products were used by relief organizations to make practical, well-informed decisions as to where relief efforts were most urgently needed and how best to carry out those efforts.

Multi-Hazard Vulnerability Decision Support

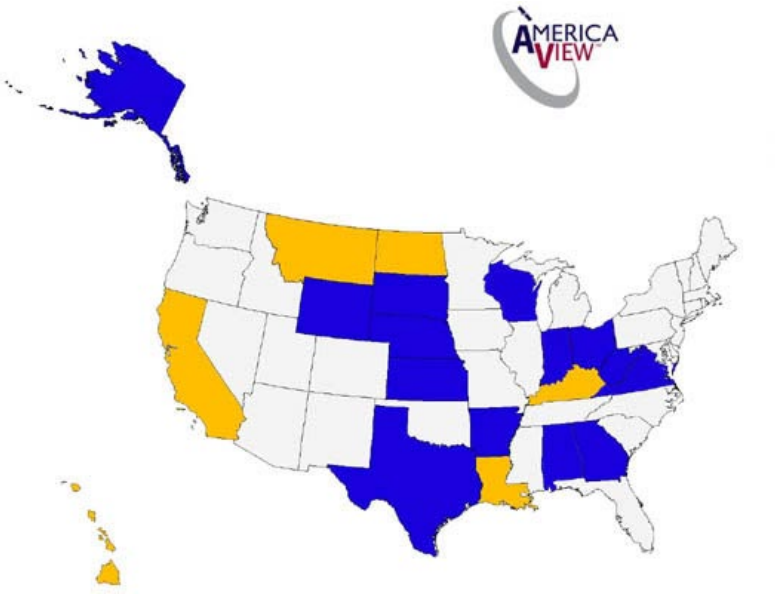
USGS and partners are developing indicators and metrics that capture and help visualize societal vulnerability to natural hazards. In FY2005, a one-day training session on vulnerability assessment techniques was conducted for local land-use planners and emergency managers, as part of a partnership with the Oregon Partners for Disaster Resistance and Resilience that includes the USGS, FEMA, the Oregon Natural Hazards Workgroup, and Oregon Emergency Management. Initial finding of a case study conducted on the vulnerability of Oregon coastal communities to catastrophic earthquakes and tsunamis, in collaboration with Oregon Emergency Management, were presented on a special panel session related to tsunamis at the Association of American Geographers conference in Denver spring 2005. This accomplishment relates to the Output Measure "Number of formal workshops or training provided to customers."

Tahoe Decision Support System

USGS scientists presented the history, methods, and major findings of the no-project alternative analysis to the Advisory Planning Committee of the Tahoe Regional Planning Agency (TRPA) on December 8, 2004. This report used projections of resident, visitor, and day-use populations, and of land use by parcel and category over time to create a "scenario generator" tool for examining the status of each of 23 indicators of environmental, infrastructure, and socioeconomic wellbeing in the Lake Tahoe Basin. The report allows the multi-state TRPA to better evaluate effectiveness of the indicators in their planning processes. This accomplishment relates to the Output Measure "Number of systematic analyses and investigations delivered to customers."

Expanding AmericaView

The AmericaView Consortium has continued to grow in membership, adding six new affiliate members and promoting two State consortia to full member status. Coordinators have been hired in several States to provide better community visibility and to increase interactions with institutions and agencies in the State. Several State government agencies began formally participating in AmericaView affiliated



AmericaView participant locations. Full members are indicated in blue and affiliate members are indicated in yellow.

StateView programs for the first time in 2005. For example, the TexasView program added its first State agency partner— Texas Parks & Wildlife Department —while KansasView was invited to become a regular contributor to the 22-member Kansas GIS Policy Board. And, as a result of continued outreach within participating States, several new research institutions joined their StateView consortium in FY2005. There are now over 65 universities participating across the country in the 16 full member StateView programs.

AmericaView provides a national "community commons" in which research, education, and training programs in each State are able to learn about, interact with, and support programs in other States. Several StateView programs have formed a working group to collect K-12 educational materials, such as lesson plans and activity modules, that have been developed by the various AmericaView participants in each State and to make those materials centrally and freely available to all StateView programs and their in-State participants. This accomplishment relates to the Output Measure "Percent of satellite data available from archive within 24 hours of capture."

Telecommunications Networks

In the second quarter of 2005, USGS accomplished Phase 1 of the DOI Enterprise Services Network (ESN) plan for the Wide Area Network (WAN) initiative by (1) establishing Internet nodes at four USGS locations and (2) converting and upgrading its Alaska telecom network to a newer and more functional system called "ESN-AK." USGS completed the field site certification and accreditation in accordance with a recent Federal Information Security Management Act (Title III of P.L. 107-347) (FISMA) Plan of Action & Milestones. This accomplishment relates to the Outcome Measure "Percentage of time that all WAN and Internet access locations are up and running and accessible."

Deferred Maintenance

The USGS will begin its second round of condition assessments for owned facilities. The cycle for completing all USGS condition assessments is 5 years. The Columbia Environmental Research Center, Northern Prairie Science Center, Woodworth Field Station, Northern Appalachian Research Laboratory, Upper Midwest Environmental Sciences Center, and the Boise District Office were assessed this year.

Condition assessments performed by the Water Resources Discipline identified the need to replace or repair active cable cars. Load tests revealed that the 600 cable cars in active use nationwide could fail under adverse field conditions such as snagged cables during flood conditions. Replacements and repairs have taken place this year using available resources.

USGS cable car over river.

The replacement of network analog and microwave stations for the earthquake network stations which provide seismic monitoring/warning for large metropolitan areas continues. This year's funding has been used to replace existing equipment that has exceeded its expected life and that cannot be expected to operate continuously without increased failure rates.

The upgrade of the critical power system at USGS National Center for Earth Resources Observation and Science has been completed. This project included the installation of redundant back-up power for the data center. This accomplishment relates to the Output Measure "Number of deferred maintenance and capital improvement."

USGS supports the Department's Management Excellence goals and provides the following accomplishments as examples.

Security Certification and Accreditation

In 2005, USGS is ameliorating weaknesses identified in the Management Control Review and Certification and Accreditation processes. Such actions include testing IT contingency plans and improving the quality of security documentation. Employees with IT security responsibilities and program managers are receiving additional training in the areas of IT security and project management.

Capital Asset Planning and Investment Control (CPIC)

In 2005, USGS achieved Level 2 compliance with the GAO IT Investment Management maturity model. Under Level 2 compliance, the CPIC program undergoes monthly reviews of major IT investments and annual reviews of non-major IT investments. Policies, procedures, and tools are now in place to identify levels of IT spending for the Exhibit 53, consistent with OMB Circular A–11. USGS subject matter experts continue to review major IT investments to ensure consistency with emerging IT policies and OMB business case criteria, and the CPIC office continues to provide guidance and technical support to USGS science and administrative programs to assist them in preparing sound and effective business case analyses for their program-specific information systems.

Facility Planning and Management

The USGS contracted a bureau Strategic Facilities Master Plan (SFMP) to improve the decisionmaking process for facilities investments, identify cost control opportunities, and strengthen the USGS budgeting process. In particular, the contractor:

- Determined the adequacy of USGS facilities, individually and in the aggregate, in meeting USGS current and planned mission needs;
- Reviewed the current mix of facilities sources (e.g., owned, rented, and cooperator space) to determine if the mix is balanced properly to meet USGS science needs;
- Recommended mechanisms for improving the integration of science/facilities planning;
- Recommended performance metrics and tracking processes for use in measuring the effectiveness, economy, and efficiency of USGS facilities and supporting programs;
- Developed a business case model for the USGS to apply to decisions about facilities investments; and
- Applied the business case model to identify priority opportunities for reducing current USGS facilities costs with due consideration of science program impact.

The USGS has received the 65 percent submittal and completed SFMP by the end of FY2005.

John W. Powell (JWP) Federal Building Renovations

The JWP's $35 million Laboratory Renovation Project was just completed. The final phase of this 9-phase multi-year project, which began in 1999, concluded in August, 2005. USGS occupied all laboratory space in the JWP by the end of September 2005. Renovated laboratories were configured using a modular concept to standardize laboratory layouts, incorporating features such as adequate removal of effluents, hazardous material storage, and improved egress adding secondary exits along with other life safety enhancements. These design concepts along with numerous others resulted in laboratories outfitted to meet USGS Mission requirements.

Space Management

The drawings of the Central and Western regions facilities were entered into a database using Aperture Software. The information contained in the database will allow the regions and headquarters to analyze the USGS space holdings and develop initiatives for improved space management and cost savings. The Web-based application was installed and is open to USGS employees.

Safety

The USGS, in cooperation with Eastern Region Geography, has developed a safety and health core competencies handbook highlighting duties and associated knowledge, skills, and abilities (KSAs) that employees must possess to perform their functions effectively for full time and collateral duty safety and health personnel serving in this program. Managers can refer to it when assessing the needs of their organization for safety support, and it can also be used to ensure the inclusion of pertinent safety duties in position descriptions for full time and collateral duty assignments. Managers are encouraged to review and consider the KSAs when assessing potential candidates in order to assist them in making quality selections for these critical assignments.

This document also identifies required and suggested training that will equip employees with the required technical competencies. As such, the document serves as a developmental tool for employees striving to perform at their optimum levels while also linking

critical FY2005 USGS Workforce Planning with the long-term Human Capital Strategic Plan Goals within DOI.

Strategic Management of Human Capital

In FY 2005, the USGS expanded its workforce planning efforts to address the bureau-level strategic goal of integrated science. In addition, workforce plans were developed and implemented for the majority of USGS science centers. Science center managers used the automated skills assessment tool to assess the skills of their current workforce and compare current skills to future skill needs based on their science plans. Regional managers aggregated science center plans at the regional level to identify regional strategies for acquiring critical skills.

During FY2005, the USGS also expanded the features of the automated skills assessment tool, extending the coverage of critical and emerging skills included in the skills assessment and refining the information reports capabilities.

The Core Competencies Model for Managers was vetted and refined via regional managerial focus groups and received final approval from the steering team in FY2005. The particular managerial competencies related to effective supervision have been incorporated into USGS supervisory training and also into supervisory evaluations. As a result of USGS work in competency development, the USGS has been asked to help the DOI lead a department-wide competency initiative effort. A core amount of competency uniformity and common understanding will be required to successfully implement and use the department-wide Learning Management System in FY2006.

In FY2005, the USGS completed a study that showed that employee perceptions of the USGS as a rewarding place to work affect employee perceptions regarding morale, recruitment and retention, science vitality, and customer satisfaction with USGS products. These study results have been incorporated in leadership and supervisory training so that USGS managers will develop skill in creating a work environment that enhances morale, recruitment and retention, science vitality, and customer satisfaction. In addition, the specific behaviors that promote a rewarding work environment have been identified, and USGS rewarding environment best practices have been compiled to assist managers in their efforts to maintain a rewarding work environment.

The USGS developed a USGS Organizational Excellence model that identifies the critical leadership and management, people, process, and structure components that support USGS science outcomes at the program, bureau, and societal levels. The model provides a systemic framework for planning and decision making, communicating the components that underpin organizational success, and measuring organizational performance. The model will be used as a basis for developing and reporting the results of the 2006 all-employee Organizational Assessment Survey.

In FY2005, the USGS reached the halfway point toward the goal of creating and training a critical mass of leaders at all levels of the organization. The Leadership Centered Culture Program implemented an intensive focus on supervisory and managerial development that will serve as a core element of the bureau's workforce planning efforts.

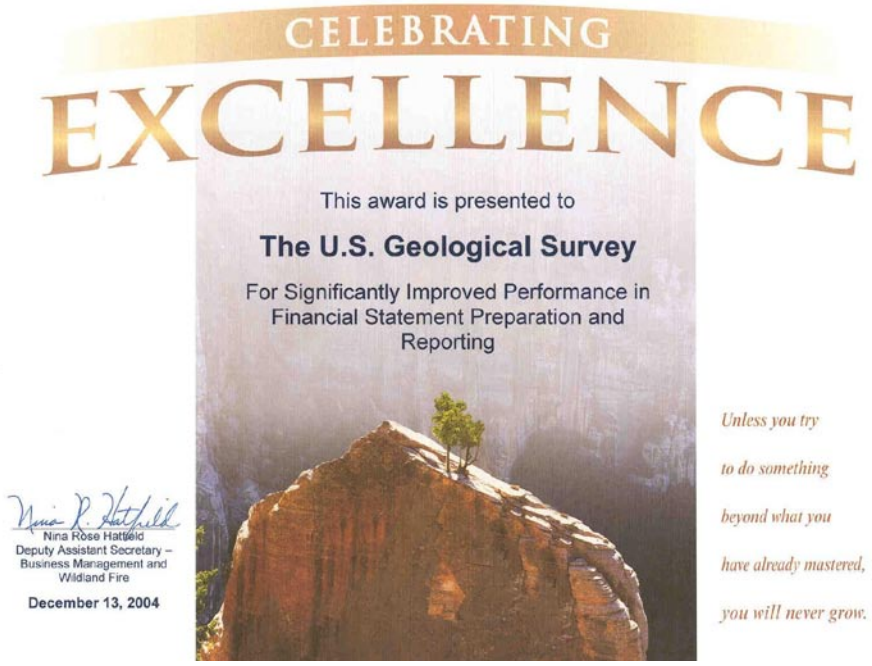
Workforce diversity remains a priority for the USGS. We participated in testing the DOI-wide "iComplaints" System. The iComplaints system automates discrimination complaints processing and reports. Additional fiscal resources were directed to the regions to develop partnerships with local colleges and universities. One example of results: the expansion of the hydrologic technician development and recruitment program with Gateway Community College to Vermillion Community College.

Financial Management

The USGS achieved an unqualified opinion on the FY2005 and FY2004 financial statements included in the Annual Performance and Accountability Report and did not receive any material weaknesses either year.

In December 2004, the Department Deputy Assistant Secretary–Business Management and Wildland Fire publicly recognized USGS for "Significantly Improved Performance in Financial Statement Preparation and Reporting." See the award on the following page.

This success was partly due to improved policies and procedures in the accounts receivable and undelivered orders processes, and a continued focus on training for administrative staffs. The bureau developed and used as a guide an annual operating schedule that highlights due dates for all financial activities for the fiscal year, which was monitored for compliance. Additionally, the bureau successfully performed a "hard-close" of accounts at the end of the third quarter, allowing program managers and administrative staff the opportunity to clean accounts before the year-end rush of activity.



Department Award presented to USGS for improved financial management.

USGS establishes National Geospatial Programs Office

In a strategic move to strengthen geographic research and to consolidate geospatial data programs, former Director Chip Groat announced the creation of a National Geospatial Programs Office. The move to transfer The National Map from the Geography Discipline to the Geospatial Information Office (GIO) will allow existing expertise in the field of geography at the USGS to focus attention on geographic research and enhance USGS leadership in both geospatial programs and geographic research.

The reorganization will consolidate USGS geospatial programs under the new National Geospatial Programs Office located within the GIO. The National Geospatial Programs Office will oversee the portfolio of national geospatial programs for which the USGS has responsibility, including the Federal Geographic Data Committee, the Geospatial One Stop project, the Department of the Interior Enterprise Geospatial Information Management activity and The National Map.

The decision to reorganize is in direct response to discussions with constituent groups about how best to meet their geospatial data needs and recommendations from a report by the National Research Council of the National Academies.

In keeping with Departmental and OMB policy for performance data verification and validation (V&V), USGS has complied with requirements for performance data credibility.

During FY2005, USGS GPRA coordinators for each Budget Activity/scientific discipline completed and certified a validation checklist comprised of criteria in the DOI V&V Assessment Matrix for the key, non-key performance measures of the DOI Strategic Plan, bureau specific, PART measures, and outputs to which USGS contributes. USGS will demonstrate accountability by establishing a clear connection among mission, work, and what work accomplishes for the funds that have been authorized and appropriated. Criteria include scrutiny to determine that goals are realistic and measurable, understandable to users, and ultimately used in decisionmaking. In addition, several of the Strategic Plan measures were assessed by the PART during FY2005, for select Biology and Geology programs. This will add additional documentation and assurance of creditability and usability of USGS performance measures for management decisionmaking.

Also, during FY2005, USGS GPRA coordinators for each Budget Activity/scientific discipline completed and certified a verification checklist comprised of criteria in the DOI V&V Assessment Matrix for all performance measures—comprising of, key, non-key and bureau-specific measures, PART measures, and PART outputs. This included assessing data accuracy, completeness, consistency, availability, and inter-control practices that serve to determine the overall reliability of the data collected. GPRA coordinators will document any inconsistencies, inaccuracies or anomalies in performance data to ensure that problems are addressed so that integrity of the performance data are ensured.

Data Validation and Verification Element	Explanation
Status of Data V&V implementation in bureau activity area	Response to GPRA requirements and DOI-AS-PMB Data V&V directive January 16, 2003.
1. Extent to which data V&V criteria have been disseminated throughout the bureau activity area units	Data V&V criteria have been disseminated and reviewed by all USGS GPRA coordinators for each Budget Activity/scientific discipline.
2. Extent to which protocols have been implemented in units providing performance data	
a) Are collection standards followed?	Performance measure names, terminology and DOI performance definition templates are understood and being followed. There is no common data entry system or data entry point for collection of performance data, but standard protocols for database queries and retrieval are used. For example, Facilities Condition Index is defined by DOI guidance as deferred maintenance costs divided by replacement value. Both of these components of FCI are based on common industry standards and used by USGS Facilities to capture and calculate performance data. The Biological Information Management and Delivery Web site requires common collection standards to report quarterly accomplishments. Reporting stations are notified at the same time of a reporting requirement, and all use the same procedure for reports. For Biological Research & Monitoring, new GPRA guidance was communicated to center directors and Regional Executive (REX) staff. This guidance establishes collection and review and editing procedures involving REX staff, with headquarters follow-up. Consistent reporting procedures, including database formats are used by centers and regions.

Data Validation and Verification Element	Explanation
b) Are data entry and transfer rules used?	Systems used to track performance data do not have extensive editing capabilities, but standard processes are used to capture performance data. Program offices understand how to obtain information about performance data and maintain data currency. For example, Water procedures for data entry, data sources and assumptions, and methods are documented by OBP discipline coordinator and are available to other OBP staff. Facilities procedures for data collection for the Condition Assessment (CA) program are documented in the contract.
c) Are data security measures implemented?	1) Firewalls, password protection, etc. are established according to bureau information system requirements. 2) Access to the databases and/or Excel spreadsheets are only available to registered, logged-on USGS users.
3. Does the bureau conduct oversight and certification of data?	USGS GPRA coordinators for each budget activity/scientific discipline provide oversight and standards to be followed, verify performance data accuracy, ensure documentation is maintained, and certify performance data reported. OBP provides a second level of oversight.
4. Are other relevant actions taken to insure credibility of performance data?	Yes, for example, the Facilities CA report is generated by a third-party contractor and reviewed by Government personnel. Also, OBP makes comments in the DOI database, if for any reason, the data is changed after it has been entered.
Data Source(s)	Data sources such as large databases, local files, Excel spreadsheets, reference files, and hardcopy files are documented. For example, Water uses a software query to extract the performance data from the National Water Information System (NWIS), a database and user interface through which the streamgages, ground-water sites, and water-quality sites report their hydrologic data on the Internet. For Facilities, the CA data are kept in hard copy form and on a USGS facilities database.
Data Limitations	Any data limitations are documented.
Corrective/Improvement Actions (Needed, In Progress, or Recently Completed)	No corrective/improvement actions are needed at present.

Program evaluations are an important tool in analyzing the effectiveness and efficiency of our programs and evaluating whether they are meeting their intended objectives. These evaluations are the foundation on which USGS gauges performance relative to the DOI End-Outcome measures for soundness of methodology, accuracy, and reliability of science. Our programs are evaluated through a variety of means, including performance audits, PART, financial audits, management control reviews, and external reviews from Congress, OMB, OIG, and other organizations, such as the National Academy of Public Administration and the National Academy of Science.

These reviews, which may take several years to complete, are critical to maintaining the USGS's reputation for scientific excellence and credibility as well as providing guidance for future research needs. The evaluations improve the accountability and quality of programs, but also identify and address gaps in programs; redirect or reaffirm program directions; identify and provide guidance for development of new programs; and review and/or motivate managers and scientists.

We conduct both internal and external peer and management reviews to improve the accountability and quality of programs; identify and address gaps in programs; redirect or reaffirm program directions; identify and provide guidance for the development of new programs; and review and/or motivate managers and scientists.

Reviews are both internal and external, conducted by USGS and non-USGS scientists, technicians, or specialists who are not involved in the specific proposal, project, program, or product under review. Our goal is to conduct an independent external peer review of ongoing programs about every 5 years, combined with more frequent independent internal management reviews.

Program	Scope and Methodology	Status	Comments
Earthquake Hazards Program	NRC Review Economic Benefits of Improved Seismic Monitoring.	Published "Improved Seismic Monitoring – Improved Decision-Making: Assessing the Value of Reduced Uncertainty" June 2005.	The National Research Council report concludes that full deployment of the USGS Advanced National Seismic System offers the potential to substantially reduce earthquake losses and their consequences by providing critical information for land-use planning, building design, insurance, warnings, and emergency preparedness and response. In the committee's judgment, the potential benefits far exceed the costs—less than 2 percent of the estimated losses. It is reasonable to conclude that mitigation actions—based on improved information and the consequent reduction of uncertainty—would yield benefits amounting to several times the cost of improved seismic monitoring.
Assessment of Water Resource Research Act Program	NRC Study reviews the entire Federal and non-Federal water research establishment, rather than a review of the USGS research programs.	Published "Confronting the Nation's Water Problems:" October 2004.	USGS is responding to the following findings and recommendations" the need for reviewing and revising the research portfolio on a regular basis; balance between short-term and long-term research efforts; the importance of interdisciplinary research; the problems of declining attention to social science topics such as water demand, water law, and other institutional topics. The report places high emphasis on "legacy monitoring systems."

Program	Scope and Methodology	Status	Comments
Geography Program	External panel discussion of Geography Science Plan at the AAG Annual Conference, April 5-9, 2005.	Completed "Geography for a Changing World: A Science Strategy for the Geographic Research of the U.S. Geological Survey."	The report on the future research strategy for the Geography discipline recommended that the USGS develop partnerships with academia for joint geographic studies. USGS has teamed with the South Dakota State University to establish a Geographic Information Science Center of Excellence at the SDSU campus in Brookings, SD. The Center of Excellence will be a major research, teaching, and service organization that incorporates the combined strengths of SDSU and USGS research scientists and scholars in a collaborative program that directly advances research and educational opportunities available in geographic information science.
Geography Science into K-12 Curriculum	NRC Review	Published "Learning to Think Spatially: GIS as a Support System in the K-12 Curriculum" June 2005.	Five of the 6 recommendations in the report related directly to the re-design, development and implementation of GIS software and GIS science for K-12 students. Activities that might address these recommendations now fall under the purview of the USGS Geospatial Information Office (and not the Geography Discipline). However, the first recommendation in the report related to encouraging the development of spatial thinking standards and course materials to train K-12 students in spatial thinking. The USGS geographic research program will support this recommendation by incorporating tools and resources for K-12 teachers into its web sites. The geographic science education Web module will include puzzles and games related to geography, a history of major events related to geography, short flash movies on geographic subjects, and resources for teachers that will include photos, maps, graphs, presentations, and posters.
Earth Surface Dynamics Program	NRC Review, the National Science Foundation and the U.S. Geological Survey asked a NRC committee to assess the scientific opportunities provided by the geologic record and recommend how scientists can take advantage of these opportunities for the Nation's benefit.	Published "The Geological Record of Ecological Dynamics Understanding the Biotic Effects of Future Environmental Change" July 2005.	The committee identified three initiatives for future research to be developed over the next decade: (1) use the geological record as a natural laboratory to explore changes in living things under a range of past conditions, (2) use the record to better predict the response of biological systems to climate change, and (3) use geologic information to evaluate the effects of human and non-human factors on ecosystems. The committee also offered suggestions for improving the field through better training, improved databases, and additional funding.

Program	Scope and Methodology	Status	Comments
Geomag-netism	Review of program and 5-year plan by an external panel of subject matter experts.	Completed	Panel reported fine job focusing on core mission of making high-quality measurements of the Earth's magnetic field. Great improvements in data transportation and calibration and in relationships between program staff and main customers (U.S. Air Force and NOAA). The panel did see considerable room for improvements in three areas: the program's visibility through an expanded line of products, facilities in need of modernization, and workforce renewal.
Geographic Analysis and Monitoring Program	DOI Land Cover Summit.	Completed	The DOI Land Cover Summit was held 1/25-27/05. Over 125 representatives from across DOI participated in discussions to further integrate DOI land cover activities. Liaisons from each bureau were named to work with USGS to identify their land cover requirements and to pursue specific areas of collaboration. The report and recommendations from the meeting, together with actions identified, are available at http://gam.usgs.gov/.
Multiple participants listed at far right.	GAO Report "Environmental Information: Status of Federal Data Programs That Support Ecological Indicators" Report No. GAO-05-376.	Completed	The following Programs participated in the GAO review: Biological Resources Discipline, Earth Resources Observation System Data Center, National Stream Water Quality Accounting Network, National Water Quality Assessment Program, and National Streamflow Information Program. There were no formal recommendations included in this report for USGS or the Department.
National Cooperative Geologic Mapping (NCGMP)	OMB/PART FY2005 for FY2007 Budget	Awaiting OMB's recommendations; anticipated by February 2005.	Once recommendations for programmatic improvements are final, an action plan to implement those improvements will be developed.
Biology Research and Monitoring (BRM)	OMB/PART FY2005 for FY2007 Budget	Awaiting OMB's recommendations; anticipated by February 2005.	Once recommendations for programmatic improvements are final, an action plan to implement those improvements will be developed.
Biological Information Management and Delivery (BIMD)	OMB/PART FY2005 for FY2007 Budget	Awaiting OMB's recommendations; anticipated by February 2005.	Once recommendations for programmatic improvements are final, an action plan to implement those improvements will be developed.

Section III
Financial Information

U.S. Geological Survey scientist Dan Dzurisin at a Global Positioning System (GPS) station on the east flank of Mount St. Helens (station Southeast Ridge). Mount Adams volcano is visible in the distance. More than a dozen GPS stations have been installed on or around Mount St. Helens to measure any deformation of the ground surface that might accompany an intense swarm of earthquakes that began on September 23, 2004.

Contents

Message from the Chief Financial Officer

FY2005 has been a very productive and successful year for the U.S. Geological Survey not only with continued excellence in our scientific mission but also in the arena of financial management resulting in an unqualified opinion on our financial statements. We successfully cleared the two reportable conditions and the only instance of noncompliance with laws and regulations identified in the Independent Auditor's Report for FY 2004: Internal Controls Over Accounts Receivables and Deferred Revenue Related to Reimbursable Agreements and Internal Controls Over IT Data Security which also led to a non-compliance with FFMIA. As noted in the appendix, we also had one of our senior scientists recognized in a special issue of Time magazine as among the world's 100 most influential people.

We are delighted and encouraged with the improvements we have made in financial management and believe we are on course to maintain the successes we have achieved. Our goal continues to be excellence in both our science and our financial practices.

The USGS is a decentralized, matrix-managed organization with a considerable number of our financial transactions processed by staffs in field locations. While on-going training in financial and administrative management is challenging logistically and funding-wise, we recognize the need and continue to look for methods of delivering needed training and to ensure that our staffs are kept abreast of current information.

In FY2005, we developed a bureau-wide training plan that identified formal courses and on-the-job training needed at various levels of administrative and management positions. To implement this plan we provided 13 Appropriations Law classes to over 300 administrative and office management personnel. These classes were held through-out the country with the attendance representing approximately 90% of our administrative staffs. This fiscal year we also developed a comprehensive Financial Operations Procedures Handbook that addresses every aspect of financial management activities performed by the bureau.

We have continued to improve our performance on the Department of the Interior's monthly performance metrics reflecting a "green" score for FY2005. This improved score was due in large measure to our percentage increase in the number of payments paid via Electronic Funds Transfers. We also determined that we comply with the Improper Payments Act, and based upon our analysis following Departmental and OMB guidelines, have determined we had no improper payments in FY2005.

We are well positioned to implement the Office of Management and Budget's revised Circular A-123, "Management's Responsibility for Internal Control" in FY2006. We hosted a two day workshop in September for our Senior Assessment Team, have documented our processes and designed our test plans. We will host two 3-day workshops for our cost centers managers bureau-wide to address various administrative accountability issues. We expect the results of these workshops to be a better informed management community on applicable laws and regulations. Similar workshops are planned in the spring of FY2006 for our administrative staffs. We will continue to consult and work closely with our two primary focus groups that are vitally important to ensuring that our business practices are sound and effectively implemented. These teams are the Business Leaders Team comprised of our Regional Management Officers, Senior Management Advisors and the Office of Regional Services chiefs and the Field Managers Team which is comprised of cost center managers and administrative officers from various centers through-out the Bureau.

Looking forward to FY2006, we will continue to focus on improvements: sustaining those that have been achieved and establishing new goals to meet the coming challenges.

Carol F. Aten
Chief Financial Officer and
Associate Director, Administrative Policy and Services
October 2005

United States Department of the Interior

OFFICE OF INSPECTOR GENERAL
Washington, D.C. 20240

November 23, 2005

Memorandum

To: Director, U.S. Geological Survey

From: Anne L. Richards
Assistant Inspector General for Audits

Subject: Independent Auditors' Report on the U.S. Geological Survey's Financial Statements for Fiscal Years 2005 and 2004 (Report No. X-IN-GSV-0008-2005)

In its report dated October 28, 2005, KPMG LLP issued an unqualified opinion on the financial statements of the U.S. Geological Survey (USGS). In addition, KPMG did not note any matters involving USGS's internal controls and its operation that KPMG considered to be reportable conditions. Furthermore, KPMG's tests of compliance with certain provisions of laws, regulations, contracts, and grant agreements disclosed no instances of noncompliance or other matters that are required to be reported under the *Government Auditing Standards*, issued by the Comptroller General of the United States; and the Office of Management and Budget's Bulletin 01-02, as amended, *Audit Requirements for Federal Financial Statements.*

The Department of the Interior contracted with KPMG, an independent certified public accounting firm, to audit the financial statements of USGS for fiscal years 2005 and 2004. The contract required that KPMG conduct its audit in accordance with the *Government Auditing Standards,* the audit requirements for Federal financial statements issued by the Office of Management and Budget, and the Government Accountability Office/President's Council on Integrity and Efficiency's *Financial Audit Manual.*

KPMG is responsible for the attached auditors' report and for the conclusions expressed therein. Accordingly, we do not express an opinion on USGS's financial statements, conclusions on the effectiveness of internal controls, conclusions on whether USGS's financial management systems substantially complied with FFMIA, or conclusions on compliance with laws and regulations.

The legislation, as amended, creating the Office of Inspector General requires semiannual reporting to the Congress on all audit reports issued, actions taken to implement audit recommendations, and recommendations that have not been implemented. Therefore, this report will be included in our next semiannual report.

We appreciate the cooperation and assistance of USGS personnel during the audit. If you have any questions, please contact me at (202) 208-5512.

Attachment

cc: Assistant Secretary, Water and Science
Director, Office of Financial Management
Chief Financial Officer, U.S. Geological Survey
Audit Liaison Officer, Water and Science
Audit Liaison Officer, U.S. Geological Survey
Focus Leader for Management Control and Audit Follow-up,
Office of Financial Management

KPMG LLP
2001 M Street, NW
Washington, DC 20036

Independent Auditors' Report

Director of the U.S. Geological Survey and Inspector General
U.S. Department of the Interior:

We have audited the accompanying consolidated balance sheets of the U. S. Geological Survey (USGS) as of September 30, 2005 and 2004, and the related consolidated statements of net cost, consolidated statements of changes in net position, combined statements of budgetary resources, and consolidated statements of financing for the years then ended (hereinafter referred to as the "financial statements"). The objective of our audits was to express an opinion on the fair presentation of these financial statements. In connection with our audits, we also considered USGS's internal control over financial reporting and tested USGS's compliance with certain provisions of applicable laws, regulations, contracts and grant agreements that could have a direct and material effect on its financial statements.

SUMMARY

As stated in our opinion on the financial statements, we concluded that USGS's financial statements as of and for the years ended September 30, 2005 and 2004, are presented fairly, in all material respects, in conformity with accounting principles generally accepted in the United States of America. We also noted that USGS implemented a new accounting standard effective October 1, 2004.

Our consideration of internal control over financial reporting would not necessarily disclose all matters in the internal control over financial reporting that might be material weaknesses under standards issued by the American Institute of Certified Public Accountants. However, we noted no matters involving the internal control and its operation that we considered to be material weaknesses.

The results of our tests of compliance with certain provisions of laws, regulations, contracts, and grant agreements disclosed no instances of noncompliance or other matters that are required to be reported under Government Auditing Standards, issued by the Comptroller General of the United States, and Office of Management and Budget (OMB) Bulletin No. 01-02, Audit Requirements for Federal Financial Statements.

The following sections discuss our opinion on USGS's financial statements, our consideration of USGS's internal control over financial reporting, our tests of USGS's compliance with certain provisions of applicable laws, regulations, contracts, and grant agreements, and management's and our responsibilities.

OPINION ON THE FINANCIAL STATEMENTS

We have audited the accompanying consolidated balance sheets of the U.S. Geological Survey (USGS) as of September 30, 2005 and 2004, and the related consolidated statements of net cost, consolidated statements of changes in net position, combined statements of budgetary resources, and consolidated statements of financing for the years then ended (hereinafter referred to as the "financial statements").

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of USGS as of September 30, 2005 and 2004, and its net costs, changes in net position, budgetary resources, and reconciliation of net costs to budgetary obligations for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

As discussed in Note 10 to the financial statements, USGS adopted the provisions of Federal Accounting Standards Advisory Board Interpretation No. 6, Accounting for Imputed Intra-departmental Costs: An Interpretation of SFFAS 4, effective October 1, 2004.

The information in the Management Discussion and Analysis, Required Supplemental Stewardship Information, and Required Supplemental Information sections is not a required part of the financial statements, but is supplementary information required by accounting principles generally accepted in the United States of America or OMB Circular A-136, Financial Reporting Requirements, Part A, Form and Content of the Performance and Accountability Report. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of this information. However, we did not audit this information and, accordingly, we express no opinion on it.

Our audits were conducted for the purpose of forming an opinion on the financial statements taken as a whole. The Performance Data and Analysis section and the other accompanying information included in the Introduction and Appendices, as reflected in the accompanying table of contents, are an integral part of USGS's Fiscal Year 2005 Performance and Accountability Report. However, this information is not a required part of the financial statements and is presented for purposes of additional analysis. The information in the Performance Data and Analysis section and other accompanying information included in the Introduction and Appendices have not been subjected to the same auditing procedures and, accordingly, we express no opinion on it.

INTERNAL CONTROL OVER FINANCIAL REPORTING

Our consideration of internal control over financial reporting would not necessarily disclose all matters in the internal control over financial reporting that might be material weaknesses under standards issued by the American Institute of Certified Public Accountants. Material weaknesses are conditions in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that misstatements, in amounts that would be material in relation to the financial statements being audited, may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. However, we noted no matters involving the internal control and its operation that we considered to be material weaknesses as defined above.

A summary of the status of prior year reportable conditions is included as Exhibit 1.

We also noted other matters involving internal control over financial reporting and its operation that we have reported to the management of USGS in a separate letter dated October 28, 2005.

COMPLIANCE AND OTHER MATTERS

The results of our tests of compliance with certain provisions of laws, regulations, contracts, and grant agreements, described in the Responsibilities section of this report, exclusive of those referred to in the Federal Financial Management Improvement Act of 1996 (FFMIA), disclosed no instances of noncompliance or other matters that are required to be reported herein under Government Auditing Standards and OMB Bulletin No. 01-02.

The results of our tests of compliance with certain provisions of other laws and regulations, exclusive of those referred to in FFMIA, disclosed no instances of noncompliance or other matters that are required to be reported under Government Auditing Standards or OMB Bulletin No. 01-02.

The results of our tests of FFMIA disclosed no instances in which USGS's financial management systems did not substantially comply with the three requirements discussed in the Responsibilities section of this report.

A summary of the status of prior year compliance findings is included as Exhibit 1.

RESPONSIBILITIES

Management's Responsibilities

The Government Management Reform Act of 1994 (GMRA), Accountability of Tax Dollars Act, and Government Corporation Control Act requires agencies to report annually to Congress on their financial status and any other information needed to fairly present their financial position and results of operations. To assist the U.S. Department of the Interior in meeting the GMRA reporting requirements, USGS prepares annual financial statements in accordance with Part A of OMB Circular A-136.

Management is responsible for the financial statements, including:

- Preparing the financial statements in conformity with accounting principles generally accepted in the United States of America;
- Preparing the Management Discussion and Analysis (including the performance measures), Required Supplemental Information, and Required Supplemental Stewardship Information;
- Establishing and maintaining internal controls over financial reporting; and
- Complying with laws, regulations, contracts, and grant agreements, including FFMIA.

In fulfilling this responsibility, management is required to make estimates and judgments to assess the expected benefits and related costs of internal control policies. Because of inherent limitations in internal control, misstatements due to error or fraud may nevertheless occur and not be detected.

Auditors' Responsibilities

Our responsibility is to express an opinion on the fiscal year 2005 and 2004 financial statements of USGS based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America, the standards applicable to financial audits contained in Government Auditing Standards, and OMB Bulletin No. 01-02. Those standards and OMB Bulletin No. 01-02 require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of USGS's internal control over financial reporting. Accordingly, we express no such opinion.

An audit includes:

- Examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements;

- Assessing the accounting principles used and significant estimates made by management; and
- Evaluating the overall financial statement presentation.

We believe that our audits provide a reasonable basis for our opinion.

In planning and performing our fiscal year 2005 audit, we considered USGS's internal control over financial reporting by obtaining an understanding of USGS's internal control, determining whether internal controls had been placed in operation, assessing control risk, and performing tests of controls in order to determine our auditing procedures for the purpose of expressing our opinion on the financial statements. We limited our internal control testing to those controls necessary to achieve the objectives described in Government Auditing Standards and OMB Bulletin No. 01-02. We did not test all internal controls relevant to operating objectives as broadly defined by the Federal Managers' Financial Integrity Act of 1982. The objective of our audit was not to provide assurance on internal control over financial reporting. Consequently, we do not provide an opinion thereon.

As required by OMB Bulletin No. 01-02, in our fiscal year 2005 audit, we considered USGS's internal control over the Required Supplemental Stewardship Information by obtaining an understanding of USGS's internal control, determining whether these internal controls had been placed in operation, assessing control risk, and performing tests of controls. Our procedures were not designed to provide assurance on internal control over Required Supplemental Stewardship Information and, accordingly, we do not provide an opinion thereon.

As further required by OMB Bulletin No. 01-02, in our fiscal year 2005 audit, with respect to internal control related to performance measures determined by management to be key and reported in the Management Discussion and Analysis and Performance Data and Analysis sections, we obtained an understanding of the design of significant internal controls relating to the existence and completeness assertions. Our procedures were not designed to provide assurance on internal control over performance measures and, accordingly, we do not provide an opinion thereon.

As part of obtaining reasonable assurance about whether USGS's fiscal year 2005 financial statements are free of material misstatement, we performed tests of USGS's compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts, and certain provisions of other laws and regulations specified in OMB Bulletin No. 01-02, including certain provisions referred to in FFMIA. We limited our tests of compliance to the provisions described in the preceding sentence, and we did not test compliance with all laws, regulations, contracts, and grant agreements applicable to USGS. However, providing an opinion on compliance with laws, regulations, contracts, and grant agreements was not an objective of our audit and, accordingly, we do not express such an opinion.

Under OMB Bulletin No. 01-02 and FFMIA, we are required to report whether USGS's financial management systems substantially comply with (1) Federal financial management systems requirements, (2) applicable Federal accounting standards, and (3) the United States Government Standard General Ledger at the transaction level. To meet this requirement, we performed tests of compliance with FFMIA Section 803(a) requirements.

DISTRIBUTION

This report is intended solely for the information and use of USGS's management, the U.S. Department of the Interior Office of Inspector General, OMB, the Government Accountability Office, and the U.S. Congress, and is not intended to be and should not be used by anyone other than these specified parties.

KPMG LLP

October 28, 2005

Exhibit 1

U.S. GEOLOGICAL SURVEY

Summary of the Status of Prior Year Findings

September 30, 2005

FY 2004 Report Reference	Condition Area	Status
A	Controls over Information Technology (IT) data security	Substantial progress has been made by USGS in addressing this issue and it is no longer considered a reportable condition.
B	Controls over accounts receivable and deferred revenues related to reimbursable agreements	Substantial progress has been made by USGS in addressing this issue and it is no longer considered a reportable condition.
C	Compliance with FFMIA – Federal financial management system requirements	Substantial progress has been made by USGS in addressing this issue and is no longer considered non-compliant.

Consolidated Financial Statements and Notes to the Financial Statements

This part of the Section III *Financial Information* contains our principal financial statements and accompanying notes, which are an integral part of the financial statements.

Contents include:

The Department of Interior

United States Geological Survey

Consolidated Balance Sheets

As of September 30, 2005 and 2004

(in thousands)

	2005	2004
Assets (Note 2)		
Intragovernmental assets:		
Fund balance with Treasury (Note 3)	$ 240,082	$ 234,783
Accounts and interest receivable (Note 4)	58,048	60,776
Other	2,518	3,883
Total intragovernmental assets	300,648	299,442
Cash	1	1
Accounts and interest receivable, net (Note 4)	75,928	81,084
Inventory and related property, net (Note 5)	789	2,433
General property, plant, and equipment, net (Notes 6 and 7)	162,170	190,769
Other	59	45
Total assets	$ 539,595	$ 573,774
Liabilities (Note 8)		
Intragovernmental liabilities:		
Accounts payable	$ 8,670	$ 9,885
Other (Notes 2, 8, and 9)	36,922	38,543
Total intragovernmental liabilities	45,592	48,428
Accounts payable	65,810	82,711
Federal employee and veterans' benefits (Note 9)	41,010	40,569
Environmental and disposal liabilities (Note 11)	82	1,097
Other		
Unfunded annual leave	59,712	57,652
Abandoned sites liabilities	21,459	20,971
Other liabilities	39,955	33,295
Total liabilities	273,620	284,723
Commitments and contingencies (Notes 11 and 12)		
Net position		
Unexpended appropriations	181,906	163,343
Cumulative results of operations	84,069	125,708
Total net position	265,975	289,051
Total liabilities and net position	$ 539,595	$ 573,774

The Department of Interior

United States Geological Survey

Consolidated Statements of Net Cost

For the Years Ended September 30, 2005 and 2004

(in thousands)

(Note 13)	2005	2004
Resource Protection		
Improve Health of Watersheds and Landscapes		
Costs	$ 112,262	$ 123,227
Less: Earned Revenue	34,307	42,979
Net Costs	77,955	80,248
Sustain Biological Communities		
Costs	162,853	142,490
Less: Earned Revenue	34,612	25,484
Net Costs	128,241	117,006
Resource Use		
Manage or Influence Resources— Energy		
Costs	29,174	28,644
Less: Earned Revenue	1,694	1,693
Net Costs	27,480	26,951
Manage or Influence Resources— Non-Energy		
Costs	67,709	65,785
Less: Earned Revenue	4,076	4,202
Net Costs	63,633	61,583
Serving Communities		
Protect Lives, Resources, and Property		
Costs	110,735	107,436
Less: Earned Revenue	14,605	11,130
Net Costs	96,130	96,306
Advance Knowledge through Scientific Leadership		
Costs	959,928	989,636
Less: Earned Revenue	316,627	322,155
Net Costs	643,301	667,481
Total		
Costs	1,442,661	1,457,218
Less: Earned Revenue	405,921	407,643
Net Cost of Operations	$ 1,036,740	$ 1,049,575

The Department of Interior

United States Geological Survey

Consolidated Statements of Changes in Net Position

For the Years Ended September 30, 2005 and 2004

(in thousands)

Unexpended Appropriations	2005	2004
Beginning balances	$ 163,343	$ 187,440
Budgetary financing sources		
Appropriations received, general funds	958,021	949,686
Appropriations transferred in/out	5,647	87
Appropriations used	(924,389)	(956,739)
Other adjustments	(20,716)	(17,131)
Net change	18,563	(24,097)
Ending balances - unexpended appropriations	$ 181,906	$ 163,343

Cumulative Results of Operations	2005	2004
Beginning balances	$ 125,708	$ 152,406
Budgetary financing sources		
Appropriations used	924,389	956,739
Non-exchange revenue and other	(104)	100
Transfers in/out without reimbursement	1,527	1,491
Donations and forfeitures of cash and cash equivalents	2,272	1,630
Other financing sources		
Imputed financing from costs absorbed by others (Note 10)	62,772	61,242
Transfers in/(out) without reimbursement	2,150	(350)
Donations and forfeitures of property	2,095	2,025
Total financing sources	995,101	1,022,877
Net cost of operations	(1,036,740)	(1,049,575)
Net change	(41,639)	(26,698)
Ending balances - cumulative results of operations	$ 84,069	$ 125,708

The Department of Interior

United States Geological Survey

Combined Statements of Budgetary Resources

For the Years Ended September 30, 2005 and 2004

(in thousands)

	2005	2004
Budgetary resources: (Note 14)		
Budget authority:		
Appropriations received	$ 960,374	$ 951,381
Net transfers, current year authority	5,437	-
Unobligated balance:		
Beginning of fiscal year	120,310	155,481
Spending authority from offsetting collections:		
Earned:		
Collected	464,807	492,777
Receivable from Federal sources	(7,334)	(31,514)
Change in unfilled customer orders:		
Advance received	3,601	(1,165)
Without advance from Federal sources	3,066	(16,761)
Subtotal: Spending authority from offsetting collections	464,140	443,337
Recoveries of prior year obligations	8,570	11,191
Permanently not available	(20,716)	(17,131)
Total budgetary resources	$ 1,538,115	$ 1,544,259
Status of budgetary resources:		
Obligations incurred:		
Direct	$ 946,344	$ 982,482
Reimbursable	475,505	441,467
Total obligations incurrred	1,421,849	1,423,949
Unobligated balance:		
Apportioned	85,644	95,112
Unobligated balance not available	30,622	25,198
Total status of budgetary resources	$ 1,538,115	$ 1,544,259
Relationship of obligations to outlays:		
Obligations incurred	$ 1,421,849	$ 1,423,949
Obligated balance, net, beginning of fiscal year	103,752	37,228
Obligated balance, net, end of fiscal year:		
Accounts receivable	135,460	142,793
Unfilled customer orders from Federal sources	45,780	42,714
Undelivered orders	(191,336)	(170,158)
Accounts payable	(105,819)	(119,101)
Total obligated balance, net, end of fiscal year	(115,915)	(103,752)
Less: Spending authority adjustments	(4,302)	37,084
Outlays:		
Disbursements	1,405,384	1,394,509
Collections	(468,409)	(491,613)
Net outlays before offsetting receipts	936,975	902,896
Less: Offsetting receipts	(2,353)	(1,695)
Net outlays	$ 934,622	$ 901,201

The Department of Interior

United States Geological Survey

Consolidated Statements of Financing

For the Years Ended September 30, 2005 and 2004

(in thousands)

	2005	2004
Resources used to finance activities		
Budgetary resources obligated		
Obligations incurred (Note 14)	$ 1,421,849	$ 1,423,949
Less: Spending authority from offsetting collections and recoveries	(472,710)	(454,528)
Obligations net of offsetting collections and recoveries	949,139	969,421
Less: Offsetting receipts	(2,353)	(1,695)
Net obligations	946,786	967,726
Other resources		
Donations and forfeitures of property	2,095	2,025
Transfers in/(out) without reimbursement	2,150	(350)
Imputed financing from costs absorbed by others (Note 10)	62,772	61,242
Net other resources used to finance activities	67,017	62,917
Total resources used to finance activities	1,013,803	1,030,643
Resources used to finance items not part of the net cost of operations		
Change in budgetary resources obligated for goods, services, and benefits ordered but not yet provided	(19,829)	8,193
Resources that fund expenses recognized in prior periods	(3,746)	(8,197)
Offsetting receipts not part of net cost of operations	2,168	1,729
Increase/(decrease) in unfilled customer orders	6,667	(17,926)
Resources that finance the acquisition of assets	(13,405)	(16,938)
Total resources used to finance items not part of the net cost of operations	(28,145)	(33,139)
Total resources used to finance the net cost of operations	985,658	997,504
Components of net cost of operations that will not require or generate resources in the current period		
Components requiring or generating resources in future periods		
Increase in annual leave liability	2,060	3,262
Increase in environmental and disposal liability	-	590
Increase in exchange revenue receivable from the public	(424)	-
Increase in other	3,729	346
Total components of net cost of operations that will require or generate resources in future periods (Note 15)	5,365	4,198
Components not requiring or generating resources		
Depreciation and amortization (Note 6)	43,650	48,256
Allocation transfers reconciling items (Note 15)	1,495	1,246
Other	572	(1,629)
Total components of net cost of operations that will not require or generate resources in the current period	45,717	47,873
Total components of net cost of operations that will not require or generate resources	51,082	52,071
Net cost of operations	$ 1,036,740	$ 1,049,575

Note 1 Summary of Significant Accounting Policies

A. Reporting Entity

The U. S. Geological Survey, a bureau within the Department of Interior, was established on March 3, 1879, by an act of Congress to conduct systematic and scientific "classification of the public lands, and examination of the geological structure, mineral resources, and products of the national domain." The mission of the USGS is to serve the Nation by providing reliable scientific information to describe and understand the earth; minimize loss of life and property from natural disasters; manage water, biological, energy and mineral resources; and enhance and protect our quality of life.

The USGS accomplishes its mission through integrated science programs consisting primarily of

- the national mapping program, which meets the Nation's needs for accurate, nationally-consistent base geospatial data by ensuring access to and advancing the application of these data and related natural science information for users;
- the geologic program, which provides Earth science information used to evaluate resource potential, to define risks associated with natural hazards, and to characterize the potential impact of natural geologic processes on human activity, the economy, and the environment;
- the water resources program that continuously assesses the Nation's water availability and quality, provides geographic and cartographic information, and addresses flood hazards by moderating the impacts of floods and improving flood disaster response; and
- the biologic research program that generates and distributes information needed in the conservation and management of the Nation's biological resources.

B. Basis of Presentation

These financial statements have been prepared to report the consolidated financial position, the net cost of operations, the changes in financial position, the combined budgetary resources, and the financing of the USGS, consistent with the Chief Financial Officers' Act of 1990 and the Government Management Reform Act of 1994. These financial statements have been prepared from the books and records of the USGS in accordance with accounting principles generally accepted in the United States of America using guidance issued by the Federal Accounting Standards Advisory Board (FASAB), the OMB, and USGS accounting policies, which are summarized in this note. These consolidated financial statements present proprietary and budgetary information, while other financial reports also prepared by the USGS pursuant to OMB directives are used to monitor and control USGS use of Federal budgetary resources. The Statement of Budgetary Resources is presented on a combined, rather than consolidated basis, and therefore intra-entity eliminations were not made for the purpose of this statement. The Statements of Financing reconcile combined amounts from the Statements of Budgetary Resources to amounts from the Consolidated Statements of Net Cost.

C. Basis of Accounting

Financial transactions are recorded on an accrual accounting basis and a budgetary basis. Under the accrual method, revenues are recognized when earned and expenses are recognized when a liability is incurred, without regard to receipt or payment of cash. Budgetary accounting facilitates compliance with legal requirements and mandated controls over the use of Federal funds. It generally differs from the accrual basis of accounting in that obligations are recognized when new orders are placed, contracts awarded, and services received that will require payments during the same or future period. The USGS intra-entity transactions have been eliminated in the Consolidated Statements of Net Cost.

D. Assets

Assets presented on USGS Consolidated Balance Sheets include both entity and non-entity balances. Entity assets are assets that USGS has authority to use in its operations. Non-entity assets are held and managed by USGS, but are not available for use in operations.

Intragovernmental assets arise from transactions between USGS and other Federal entities.

E. Stewardship Assets

Stewardship assets consists of museum and library collection heritage assets that have been entrusted to USGS to be maintained in perpetuity for the benefit of current and future generations. The stewardship heritage assets managed by USGS are considered priceless and irreplaceable. Because of this, USGS assigns no financial value to them and the property, plant, and equipment capitalized and reported on the Consolidated Balance Sheet excludes these assets in accordance with Federal accounting standards. Any purchases of new stewardship assets are expensed in the year they were incurred.

F. Property, Plant, and Equipment

Property, plant, and equipment consist of land, structures, facilities and leasehold improvements, facilities under contruction, equipment, and software purchased or developed for internal use. There are no restrictions on the use or convertibility of property, plant, and equipment.

The USGS capitalizes property, plant, and equipment purchases with an acquisition cost in excess of $100,000 for structures, facilities, and software, and $15,000 for all other capital assets. Depreciation or amortization is computed using the straight-line method over the assets' useful lives of 30 years for structures and facilities, and ranging from 3 to 20 years for equipment and 2 to 5 years for software.

Internal-use software includes purchased commercial off-the-shelf software (COTS), contractor-developed software, and software that was internally developed by USGS employees. Internal-use software is capitalized at cost if the acquisition cost is $100,000 or more. For COTS software, the capitalized costs include the amount paid to the vendor for the software; for contractor-developed software it includes the amount paid to a contractor to design, program, install, and implement the software. Capitalized costs for internally developed software include the full cost (direct and indirect) incurred during the software development stage. Amortization of capitalized software begins on the date of acquisition, if purchased, or when the module or component has been successfully tested if developed internally.

Costs for construction projects are recorded as construction-in-process until completed. Depreciation expense begins once the asset is placed into service.

The USGS leases the majority of its office space and vehicles from the General Services Administration. The lease costs approximate commercial lease rates for similar properties and vehicles.

G. Fund Balance with Treasury and Cash

Fund Balances with Treasury are cash balances remaining as of fiscal year-end from which USGS is authorized to pay liabilities resulting from operational activity, except as restricted by law. Fund balance with Treasury includes funds received from direct appropriations, transfers, offsetting receipts, recoveries, and funds held in budget clearing accounts. The USGS is permitted by law to use appropriated funds to finance its working capital fund.

H. Other Assets, Advances, and Prepayments

Payments in advance of the receipt of goods and services are recorded as prepaid charges at the time of prepayment and recognized as expenditures/operating expenses when the related goods and services are received.

I. Accounts and Interest Receivable

Accounts receivable consist of amounts owed to the USGS by other Federal agencies and the public. Unbilled accounts receivable represent amounts that have been earned but not yet billed to reimbursable customers. Receivables from Federal agencies result from reimbursable services performed, and from joint funding agreements with State, local, and regional agencies for cooperative work in support of the "Surveys, Investigations, and Research" appropriation. Receivables also include balances owed for credit sales of products and maps to Federal agencies and the public and for interest, administrative costs, and penalties due on delinquent receivables. The majority of USGS accounts receivable are generated from the water resource and national mapping programs.

Amounts due from Federal agencies are considered fully collectible. Receivables due from the public are stated net of an allowance for estimated uncollectible amounts, determined by considering the debtor's current ability to pay, the debtor's payment record and willingness to pay, and an analysis of aged receivable activity.

J. Inventory

Inventory includes maps and map products that are held for sale and raw materials held for future use. Raw materials consist primarily of paper stock and ink used in the production of maps and map products, film for aerial photographs, and blank CDs for digital data. All inventory products and materials are valued at historical cost, using a method of averaging actual costs to produce like-kind scale maps within the same fiscal year. The USGS estimates an allowance for excess, spoiled, or obsolete map inventory to arrive at a net realizable value, based on inventory turnover and current stock levels.

K. Liabilities

Liabilities covered by budgetary or other resources are those liabilities of USGS for which Congress has appropriated funds or funding is otherwise available to pay amounts due. Liabilities not covered by budgetary or other resources represent amounts owed in excess of available Congressionally-appropriated funds or other amounts. The liquidation of liabilities not covered by budgetary or other resources is dependent on future Congressional appropriations or other funding. Intragovernmental liabilities are claims against USGS by other Federal entities.

L. Other Liabilities: Deferred Revenue, Deferred Credits, and Deposit Fund Liability

Deferred revenue and deferred credits consist of advances received from Federal and public entities for goods and services that will not be fully earned until the related goods or services have been provided by USGS. The majority of USGS deferred revenue is generated from the water resources program. Revenue is recognized as reimbursable costs are incurred, and the deferred revenue balance is reduced accordingly.

The deposit fund liability represents receipts of funds held on deposit prior to completion of a signed agreement to provide reimbursable services to public and Federal entities. The deposit fund liability also consists of monies that were not obligated prior to the agreement expiration that are funded by annual year appropriations, which will be returned to the customer.

M. Revenues, User Fees, and Financing Sources

Appropriations. The USGS receives the majority of the funding needed to support its programs through Congressional appropriations. Financing sources are received in annual, multi-year, and no-year appropriations that may be used, within statutory limits, for operating and capital expenditures.

Upon expiration of an annual or multiple-year appropriation, the obligated and unobligated balances retain their fiscal year identity, and are maintained separately within an expired account. The unobligated balance can be used to make adjustments to existing obligations, but is otherwise not available for expenditures. Annual and multiple-year appropriations are canceled at the end of the fifth year after expiration. No-year appropriations do not expire. Appropriations of budget authority are recognized as used when a liability for goods and services or benefits and grants are incurred.

Exchange revenues. Additional funds are obtained through reimbursements for services performed for other Federal agencies and the public and fees charged for surveys, investigations, and research. Revenue and intra-governmental reimbursements are recognized as earned when the goods have been delivered or services rendered by USGS. Revenues earned from public sources are derived from States and municipalities for making cooperative topographic and geologic surveys and water resource investigations; proceeds from the sale of photographs, maps, and records; proceeds from the sale of personal property; and reimbursements from permits and licenses of the Federal Energy Regulatory Commission. Revenues from certain cooperators represent about half of the total cost; the USGS pays the remaining half of the total cooperators cost. Revenues earned from other Federal agencies are derived from special-purpose mapping and investigations. Revenues are also received through the Department of State, from foreign countries, and international organizations for scientific and technical assistance.

The USGS has specific legislative authority to receive revenue from non-Federal reimbursable customers as budgetary resources. The USGS also has authority to receive contributions from outside organizations to perform work desired mutually by multiple parties. In addition, the USGS receives rental receipts for quarters provided at remote locations.

User fees are set at a level that will recover the full costs associated with the services for specific customers. Prices for information products that are sold on a retail basis are set at a level that will recover the full costs of reproduction and dissemination, or costs incurred after the mission related information is collected and archived. User fees and product prices are developed in accordance with cost components of OMB Circular A 25, *User Charges* with review and approval by the Director, or a delegated party. The annual Cost Recovery Report and regularly scheduled independent pricing reviews by product line are among the methods used to monitor compliance with the USGS policies.

Imputed financing sources. In certain cases, operating costs of the USGS are paid for by funds appropriated with other Federal entities. For example, pension benefits for most USGS employees are paid for by the U.S. Office of Personnel Management (OPM) and certain legal judgments against the USGS are paid from the Judgment Fund maintained by Treasury. OMB limits imputed costs to be recognized by Federal entities to the following: (1) employees' pension benefits; (2) health insurance, life insurance, and other benefits for retired employees; (3) other post employment benefits for retired, terminated, and inactive employees, including severance payments, training and counseling, continued health care, and unemployment and workers' compensation under the Federal Employees' Compensation Act; and (4) losses in litigation proceedings. USGS also records intra-departmental imputed costs in accordance with Department policy and FASAB's Interpretation Number 6, *Accounting for Imputed Intra-departmental Costs: An Interpretation of SFFAS Number 4*. The USGS includes applicable imputed costs on the Consolidated Statements of Net Cost. In addition, an imputed financing source is recognized on the Consolidated Statements of Changes in Net Position.

N. Contingent Liabilities

A contingency is an existing condition, situation, or set of circumstances involving uncertainty as to possible gain or loss. The uncertainty will ultimately be resolved when one or more future events occur or fail to occur. USGS recognizes a contingent liability when a past event or exchange transaction has occurred and a future outflow or other sacrifice of resources is measurable and probable. A contingency is disclosed in the Notes to the Financial Statements when any of the conditions for liability recognition are met and when the chance of the future confirming event or events occurring is more than remote but less than probable. A contingency is not disclosed in the Notes to the Financial Statements when any of the conditions for liability recognition are not met and when the chance of the future event or events occurring is remote.

O. Accrued Annual, Sick, and Other Leave and Compensatory Time

Annual leave and other compensatory leave time are accrued when earned. The accrual is presented as a component of other liabilities with the public in the Consolidated Balance Sheet and is adjusted for changes in

compensation rates and reduced for annual leave taken. Sick leave is provided to employees on a use or lose basis and is expensed when taken.

P. Workers' Compensation

The Federal Employees Compensation Act (FECA) provides income and medical cost protection to covered Federal civilian employees injured on the job, to employees who have incurred work-related occupational diseases, and to beneficiaries of employees whose deaths are attributable to job-related injuries or occupational diseases. The FECA program is administered by the Department of Labor (DOL), which pays valid claims and subsequently seeks reimbursement from the Federal agencies employing the claimants.

The FECA liability consists of two components. The first component is based on actual claims paid by DOL but not yet reimbursed. USGS reimburses DOL for the amount of the actual claims as funds are appropriated for this purpose. Reimbursements to the Department of Labor on payments made occur approximately two years subsequent to the actual disbursement. As a result, USGS recognizes a liability for the actual claims paid by DOL and to be reimbursed by USGS. Budgetary resources for this intra-governmental liability are made available to USGS as part of its annual appropriation from Congress in the year in which the reimbursement to the Department of Labor takes place.

The second component is the estimated liability for future benefit payments as a result of past events. This liability includes death, disability, medical, and miscellaneous costs. DOL determines this component annually, as of September 30, using a method that considers historical benefit payment patterns, wage inflation factors, medical inflation factors, and other variables. The projected annual benefit payments are discounted to present value using OMB's economic assumptions for 10-year Treasury notes and bonds. To provide for the effects of inflation on the liability, wage inflation factors (i.e., cost of living adjustments) and medical inflation factors (i.e., consumer price index medical adjustments) are applied to the calculation of projected future benefit payments. These factors are also used to adjust historical benefit payments to current-year constant dollars. A discounting formula is also used to recognize the timing of benefit payments as thirteen payments per year instead of one lump sum payment per year. Based on information provided by the DOL, DOI allocates the actuarial liability to its bureaus and Departmental offices based on the payment history for the bureaus and Departmental offices. The estimated liability is not covered by budgetary resources and will require future funding.

DOL also evaluates the estimated projections to ensure that the estimated future benefit payments are appropriate. The analysis includes three tests: (1) a comparison of the current-year projections to the prior-year projections; (2) a comparison of the prior-year projected payments to the current-year actual payments, excluding any new case payments that had arisen during the current year; and (3) a comparison of the current-year actual payment data to the prior-year actual payment data. Based on the outcome of this analysis, adjustments may be made to the estimated future benefit payments.

Q. Retirement Plans

Civil Service Retirement System (CSRS) and Federal Employees Retirement System (FERS). All USGS employees with permanent status participate in either the CSRS or FERS defined-benefit pension plans. FERS went into effect on January 1, 1987. FERS and Social Security automatically cover most employees hired after December 31, 1983. Employees hired prior to January 1, 1984, could elect to either join FERS and Social Security, or remain in CSRS.

USGS is not responsible for and does not report CSRS or FERS assets, accumulated plan benefits, or liabilities applicable to its employees. OPM administers the plans, is responsible for, and reports these amounts.

For CSRS-covered employees, in both FY2005 and FY2004, USGS was required to make contributions to the plan matching the employee's contribution, which was 7 percent of the employee's basic pay. For each fiscal year, OPM calculates the U.S. government's service cost for covered employees, which is an estimate of the amount of funds that, if accumulated annually and invested over an employee's career, would be enough to pay that employee's future

benefits. Since the U.S. government's estimated service cost exceeds contributions made by employer agencies and covered employees, this plan is not fully funded by the USGS and its employees.

USGS has recognized an imputed cost and imputed financing source for the difference between the estimated service cost and the contributions made by USGS and its covered employees.

FERS contributions made by employer agencies and covered employees exceed the U.S. Government's estimated service cost. For FERS-covered employees, USGS was required in FY2005 and FY2004 to make contributions of 10.7 percent of basic pay. Employees contributed 0.8 percent of basic pay. Employees participating in FERS are covered under the Federal Insurance Contributions Act (FICA), for which USGS contributes a matching amount to the Social Security Administration.

Thrift Savings Plan (TSP). Employees covered by CSRS and FERS are eligible to contribute to the U.S. Government's TSP, administered by the Federal Retirement Thrift Investment Board. A TSP account is automatically established for FERS-covered employees, and USGS makes a mandatory contribution of 1 percent of basic pay. FERS-covered employees are entitled to contribute up to 15 percent of basic pay to their TSP account, with USGS making matching contributions up to 5 percent of basic pay. Employees covered by CSRS are entitled to contribute up to 10 percent of basic pay to their TSP account. USGS makes no matching contributions for CSRS-covered employees.

Federal Employees Health Benefit (FEHB) Program. Most USGS employees are enrolled in the FEHB Program, which provides post-retirement health benefits. OPM administers this program and is responsible for the reporting of liabilities. Employer agencies and covered employees are not required to make any contributions for post-retirement health benefits. OPM calculates the U.S. government's service cost for covered employees each fiscal year. USGS has recognized the entire service cost of these post-retirement benefits for covered employees as an imputed cost and imputed financing source.

Federal Employees Group Life Insurance (FEGLI) Program. Most USGS employees are entitled to participate in the FEGLI Program. Participating employees can obtain basic term life insurance, with the employee paying two-thirds of the cost and USGS paying one-third. Additional coverage is optional, to be paid fully by the employee. The basic life coverage may be continued into retirement if certain requirements are met. OPM administers this program and is responsible for the reporting of liabilities. For each fiscal year, OPM calculates the U.S. government's service cost for the post retirement portion of basic life coverage. USGS contributions to the basic life coverage are fully allocated by OPM to the pre-retirement portion of coverage, and accordingly, USGS has recognized the entire service cost of the post-retirement portion of basic life coverage as an imputed cost and imputed financing source.

R. Income Taxes

The USGS, as a Federal agency, is not subject to Federal, State, or local income taxes and, accordingly, no provision for income taxes has been recorded in the accompanying financial statements.

S. Use of Estimates

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make certain estimates and assumptions in reporting assets, liabilities, revenues, expenses, and financial sources; and in the related note disclosures. Actual results could differ from these estimates. Significant estimates underlying the accompanying financial statements include accounts payable; the allowance for doubtful accounts receivable; property, plant, and equipment useful lives and impairments; contingent and environmental liabilities; the FECA actuarial liability; and the allowance for obsolete inventory.

T. Reclassifications

Certain reclassifications have been made to the 2004 balances to conform to the 2005 presentation.

Note 2 Assets Analysis

All USGS assets are entity assets, except a small portion of fund balance with Treasury. Non-entity assets include amounts due to USGS from accrued interest and penalties on delinquent debt. A corresponding payable to Treasury is recorded in other liabilities.

USGS does not have any entity restricted assets.

		2005	2004
Total non-entity restricted assets, fund balance with Treasury	$	212	231
Total entity unrestricted assets		539,383	573,543
Total assets	$	539,595	573,774

Note 3 Fund Balance with Treasury

Fund Balance with Treasury consists of the following at September 30:

		2005	2004
General funds	$	150,234	136,992
Special funds		1,380	1,798
Revolving funds		80,386	85,133
Trust funds		1,759	1,509
Other funds		6,323	9,351
Total fund balance with Treasury by fund type	$	240,082	234,783

USGS maintains balances with Treasury by fund type. The fund types and purpose are described below:

General funds. These funds consist of expenditure accounts used to record financial transactions arising from Congressional appropriations.

Special funds. These accounts are credited with receipts from special sources that are earmarked by law for a specific purpose. When collected, these receipts are available immediately for expenditure for special programs, such as providing housing for employees on field assignments, operations and maintenance for the temporary housing, cleanup associated with the Exxon Valdez oil spill, and operating science and cooperative programs.

Revolving funds. These funds account for cash flows to and from the government resulting from operations of the Working Capital Fund and do not fund normal operating expenses of the bureau. These funds are also restricted to the purposes set forth in the legislation that established the Working Capital Fund and related investment plans.

Trust funds. These funds are used for the acceptance and administration of funds contributed from public and private sources and programs in cooperation with other Federal and State agencies or private donors.

Other Fund Types. These include miscellaneous receipt accounts, transfer accounts, performance bonds, deposit and clearing accounts maintained to account for receipts, and disbursements awaiting proper classification.

Notes to the Financial Statements—As of September 30, 2005 and 2004 (in thousands) 115

Status of Fund Balance with Treasury at September 30, 2005 and 2004 is as follows:

Unobligated, unavailable fund balance represents amounts in deposit and budget clearing accounts and amounts from appropriations for which the period of availability for obligation has expired. These balances remain available for upward adjustments of obligations incurred during the period for which the appropriation was available.

Unobligated balances:		2005	2004
Available	$	86,635	95,910
Unavailable		30,621	25,197
Obligated balances not yet disbursed		116,502	104,325
Subtotal		233,758	225,432
Fund Balance with Treasury Not Covered by Budgetary Resources:			
Deposit funds, clearing, and suspense accounts		6,324	9,351
Total Status of Fund Balance with Treasury	$	240,082	234,783

Note 4 Accounts and Interest Receivable

Accounts receivable consist of amounts owed to the USGS by other Federal agencies and the public. Unbilled accounts receivable represents amounts that have been earned but not yet billed to reimbursable customers. This account functions much like a "work-in-process" record of the costs incurred on customer agreements. Due to the nature of certain agreements with reimbursable customers that require invoicing upon completion of the work, USGS sometimes bills customers years after the project was initiated. This procurement practice results in the majority of accounts receivable being comprised of unbilled balances.

Accounts receivable are reduced to net realizable value by an allowance for doubtful accounts. The allowance for public receivables is estimated quarterly based on identification of specific delinquent receivables, an analysis of aged receivable activity and historical trends adjusted for current market conditions, as well as management's judgment regarding the debtor's willingness and ability to pay. Federal receivables are considered fully collectible.

Interest receivable represents interest income earned on outstanding receivables that has not yet been collected. Interest accrues on a daily basis beginning thirty days from the date the notice of amount due was sent. Interest is charged at the rate established by the Secretary of the Treasury.

Accounts and Interest Receivable from Federal Agencies at September 30, 2005 and 2004, respectively, consists of:

Accounts and Interest Receivable from Federal Agencies		2005	2004
Current	$	125	6,454
1-180 Days Past Due		-	255
181-365 Days Past Due		-	276
1-2 Years Past Due		-	2
Total Billed Accounts and Interest Receivable— Federal		125	6,987
Unbilled Accounts Receivable		57,923	53,789
Total Accounts and Interest Receivable— Federal	$	58,048	60,776

116 Notes to the Financial Statements—As of September 30, 2005 and 2004 (in thousands)

Accounts and Interest Receivable from Public Agencies at September 30, 2005 and 2004, respectively, consists of:

Accounts and Interest Receivable from Public Agencies		2005	2004
Current	$	21,382	17,553
1-180 Days Past Due		3,689	8,771
181-365 Days Past Due		349	686
1-2 Years Past Due		300	203
Total Billed Accounts and Interest Receivable— Public		25,720	27,213
Unbilled Accounts Receivable		52,452	55,562
Total Accounts and Interest Receivable— Public		78,172	82,775
Allowance for Doubtful Accounts— Public		(2,244)	(1,691)
Total Accounts and Interest Receivable— Public, Net of Allowance	$	75,928	81,084

Change in Allowance for Doubtful Accounts— Public		2005	2004
Allowance for Doubtful Accounts, beginning	$	1,691	3,329
Additions		1,250	-
Deletions		(697)	(1,638)
Allowance for Doubtful Accounts - Public	$	2,244	1,691

Note 5 Inventory

Inventory consists of the following at September 30, 2005 and 2004:

		2005	2004
Published maps held for sale	$	9,676	10,070
Raw materials held for sale/use		-	1,252
Allowance for obsolescence		(8,887)	(8,889)
Total	$	789	2,433

USGS disseminates earth, water, and biological science information through various media, including maps, reports, digital data sets, and general interest publications of the USGS and other Federal agencies. Maps and map products are located at the USGS Rocky Mountain Mapping Center in Denver, Colorado, and at several Earth Science Information Centers across the United States. The USGS maintains an inventory of maps and map products that are available to respond to national emergencies and resource management needs, as well as governmental requests.

At right is an example of a map included in inventory available for sale.

Notes to the Financial Statements—As of September 30, 2005 and 2004 (in thousands) 117

Note 6 General Property, Plant, and Equipment

Property, plant, and equipment consist of the following at September 30, 2005:

	Acquisition Cost	Accumulated Depreciation	Net Book Value
Land and land improvements	$ 300	-	$ 300
Buildings	104,678	70,508	34,170
Structures and facilities	13,230	9,613	3,617
Leasehold improvements	25,730	5,897	19,833
Construction in progress	1,745	-	1,745
Equipment and vehicles	466,582	370,068	96,514
Internal use software:			
In use	10,545	4,563	5,982
In development	9	-	9
Total property, plant, and equipment	$ 622,819	460,649	$ 162,170

Property, plant, and equipment consist of the following at September 30, 2004:

	Acquisition Cost	Accumulated Depreciation	Net Book Value
Land and land improvements	$ 300	-	$ 300
Buildings	100,007	68,040	31,967
Structures and facilities	12,980	9,201	3,779
Leasehold improvements	23,720	2,504	21,216
Construction in progress	6,514	-	6,514
Equipment and vehicles	465,756	346,600	119,156
Internal use software:			
In use	8,655	2,914	5,741
In development	2,096	-	2,096
Total property, plant, and equipment	$ 620,028	429,259	$ 190,769

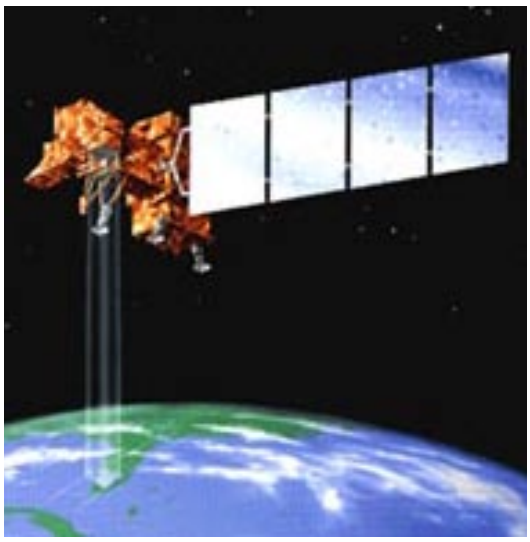
Depreciation expense amounted to approximately $43.6 million and $48.3 million, for the years ended September 30, 2005 and 2004, respectively.

118 Notes to the Financial Statements—As of September 30, 2005 and 2004 (in thousands)

Note 7 General Property, Plant, and Equipment Impairment

The USGS jointly developed a sun-synchronous, Earth-orbiting satellite (Landsat 7) with the National Aeronautics and Space Administration (NASA) and the National Oceanic and Atmospheric Administration. NASA incurred the construction and launching costs. In FY2002, the satellite was transferred to USGS and recorded in equipment at its net book value of $258 million. The satellite is being depreciated over its estimated useful life of 5 years.

The primary objective of the Landsat Project is to ensure a collection of consistently calibrated Earth imagery. Landsat's Global Survey mission is to establish and execute a data acquisition strategy that ensures repetitive acquisition of observations over the Earth's land mass, coastal boundaries, and coral reefs; and to ensure the data acquired are of maximum utility in supporting the scientific objectives of monitoring changes in the Earth's land surface and associated environment.



Landsat 7 will gather remotely sensed images of the land surface and surrounding coastal regions.

Landsat 7 satellite was launched April 15, 1999. The first Landsat satellite was launched in 1972. Out of the 7 Landsat satellites, only Landsat 5 and Landsat 7 are still operational.

On May 31, 2003, the Landsat 7 satellite suffered a component failure that affected the USGS's ability to acquire and distribute data collected by the Enhanced Thematic Mapper Plus instrument, resulting from a failure of the instrument's scan line corrector (SLC). The non-functioning SLC causes individual scan lines to alternately overlap and leave large gaps at the edges of a normal Landsat image.

USGS assembled an anomaly team comprised of a variety of experts and collaborated with NASA, the Aerospace Corporation, Lockheed Martin, Honeywell, Raytheon, SAIC, and others to develop a recovery plan which was approved by USGS leadership. Unfortunately, the full recovery attempt that took place on September 7, 2003, failed.

Subsequent tests and the failed full recovery attempt confirmed that, while it is not possible to acquire 100 percent of the data in a post-failure image, approximately 75 percent of a pre-failure image is still captured. It is also possible, using basic interpolation algorithms, to "fill in" some of the missing pixels toward the center portion of a scene in order to generate a more complete image.

As of May 31, 2003 when the failure occurred, the net book value of Landsat 7 was $172 million. Based on an internal analysis taking into consideration the diminished capacity of the asset and the potential future marketability of the product sales generated by the asset, USGS management estimated that an economic impairment loss of $81.1 million should be recognized in the FY2003 Statement of Net Cost. The net book value of the Landsat 7 satellite was approximately $25.1 million and $48.8 million at September 30, 2005 and 2004, respectively.

At the point of impairment, the normal depreciation rate estimate was changed to equal the net book value (after impairment) at May 31, 2003, divided by the remaining useful life previously established. As a result, depreciation expense and net cost of operations were reduced for the years ended September 30, 2005 and 2004, by $27.8 million and $26.1 million, respectively.

Note 8 Liabilities Not Covered by Budgetary Resources

Liabilities not covered by budgetary or other resources represent amounts owed in excess of available Congressional appropriated funds or other amounts. The liquidation of liabilities not covered by budgetary or other resources is dependent on future Congressional appropriations or other funding source.

	Covered by Budgetary Resources		Not Covered by Budgetary Resources		
	Current	**Non-current**	**Current**	**Non-current**	**2005**
Intragovernmental liabilities					
Accounts payable	$ 8,670	-	-	-	$ 8,670
Other liabilities					
Accrued employee benefits	5,341	-	-	2,889	8,230
Advances from others	1,975	-	-	-	1,975
Deposit funds	-	-	255	-	255
Unfunded FECA liability	-	-	2,932	4,398	7,330
Resources payable to Treasury	-	-	81	-	81
Resources payable to GSA	-	-	5,288	13,763	19,051
Total other liabilities	7,316	-	8,556	21,050	36,922
Total intragovernmental liabilities	15,986	-	8,556	21,050	45,592
Public liabilities					
Accounts payable	65,810	-	-	-	65,810
FECA actuarial liability	-	-	-	41,010	41,010
Environmental and disposal liabilities	-	-	-	82	82
Other liabilities					
Accrued payroll and benefits	26,171	-	-	-	26,171
Unfunded annual leave	-	-	2,986	56,726	59,712
Advances from others and deferred credits	4,437	-	32	-	4,469
Deposit funds	-	-	6,069	-	6,069
Contingent liabilities	-	-	-	2,208	2,208
Abandoned sites liabilities	-	-	-	21,459	21,459
Contract holdbacks	-	-	-	1,038	1,038
Total other liabilities	30,608	-	9,087	81,431	121,126
Total public liabilities	96,418	-	9,087	122,523	228,028
Total liabilities	$ 112,404	-	17,643	143,573	$ 273,620

120 Notes to the Financial Statements—As of September 30, 2005 and 2004 (in thousands)

	Covered by Budgetary Resources		Not Covered by Budgetary Resources		
	Current	Non-current	Current	Non-current	2004
Intragovernmental liabilities					
Accounts payable	$ 9,885	-	-	-	$ 9,885
Other liabilities					
Accrued employee benefits	4,414	-	-	-	4,414
Advances from others	1,744	-	-	-	1,744
Deposit funds	-	-	2,997	-	2,997
Unfunded FECA liability	-	-	3,176	4,765	7,941
Resources payable to Treasury	-	-	231	-	231
Resources payable to GSA	-	-	4,379	16,837	21,216
Total other liabilities	6,158	-	10,783	21,602	38,543
Total intragovernmental liabilities	16,043	-	10,783	21,602	48,428
Public liabilities					
Accounts payable	82,711	-	-	-	82,711
FECA actuarial liability	-	-	-	40,569	40,569
Environmental and disposal liabilities	-	-	-	1,097	1,097
Other liabilities					
Accrued payroll and benefits	22,309	-	-	2,297	24,606
Unfunded annual leave	-	-	2,883	54,769	57,652
Advances from others and deferred credits	1,474	-	238	-	1,712
Deposit funds	-	-	5,939	-	5,939
Contingent liabilities	-	-	-	-	-
Abandoned sites liabilities	-	-	-	20,971	20,971
Contract holdbacks	-	-	-	1,038	1,038
Total other liabilities	23,783	-	9,060	79,075	111,918
Total public liabilities	106,494	-	9,060	120,741	236,295
Total liabilities	$ 122,537	-	19,843	142,343	$ 284,723

Notes to the Financial Statements—As of September 30, 2005 and 2004 (in thousands) 121

Note 9 FECA Liabilities

USGS has recorded an estimated, unfunded liability for the expected future cost for death, disability, and medical claims under the Federal Employees Compensation Act of approximately $41 million and $40.6 million as of September 30, 2005 and 2004, respectively. This estimated liability is calculated by the Department of Labor using a method that considers historical benefit payment patterns, wage inflation factors, medical inflation factors, and other variables. These actuarially computed projected annual benefit payments are discounted to present value using the Office of Management and Budget's economic assumptions for 10-year Treasury notes and bonds.

USGS also recorded an estimated, unfunded liability for the expected future payments to the Department of Labor in payment of outstanding workers compensation claims of approximately $7.3 and $7.9 million as of September 30, 2005 and 2004, respectively.

		2005	2004
FECA Actuarial liability	$	41,010	40,569
FECA Workers compensation liability		7,330	7,941
Total	$	48,340	48,510

Note 10 Imputed Financing Costs

Imputed financing sources are recorded in the financial statements for amounts paid or to be paid on behalf of the USGS by other Federal agencies. The Office of Personnel Management pays Federal employee pension and other future retirement benefits on behalf of Federal agencies. The Office of Personnel Management provided rates for recording the estimated cost of pension and other future retirement benefits paid by OPM on behalf of Federal agencies. The costs of these benefits are reflected as imputed financing in the consolidated financial statements.

During FY2005, USGS prospectively implemented the Federal Accounting Standards Advisory Board's Interpretation Number 6, *Accounting for Imputed Intra-departmental Costs: An Interpretation of SFFAS Number 4*. This implementation resulted in USGS recording $330 thousand in intra-departmental costs originating from services received by the Department's Solicitor office.

Imputed financing costs for the years ended September 30, 2005 and 2004 consisted of:

OPM:		2005	2004
Pension expense	$	24,793	26,872
Federal employees health benefits		37,459	34,250
Federal employees group life insurance program		90	91
Total OPM		62,342	61,213
Intra-Departmental imputed costs		330	-
Non-reimburseable claims paid by the Treasury Judgment Fund		100	29
Total	$	62,772	61,242

122 Notes to the Financial Statements—As of September 30, 2005 and 2004 (in thousands)

Note 11 Contingent and Environmental and Disposal Liabilities

The USGS is a party to various administrative proceedings, legal actions, environmental suits, and claims that may eventually result in the payment of substantial monetary claims to third parties, or in the unplanned reallocation of material budgetary resources to pay for the cleanup of environmentally damaged sites.

USGS has accrued any legal liabilities deemed to be probable of loss in the Consolidated Balance Sheet. The payment of any judgments against USGS would be made from the U.S. Department of Treasury's Judgment Fund.

Additionally, USGS has several cases that the Solicitor believes are reasonably possible of loss, some of which cannot be estimated. The range of loss for reasonably possible cases that could be estimated by the Solicitor is disclosed below.

The USGS has accrued the probable and estimable liability represented by environmental site cleanup. Additionally, USGS has several environmental cases that USGS experts believe the range of loss cannot presently be estimated.

Changes in existing estimated environmental and disposal costs are based on progress made in, and revision of, the cleanup plans assuming current technology, laws, and regulations. There are no material changes in total estimated cleanup costs that are due to changes in technology, laws, and regulations. Estimated contingent and environmental disposal liabilities at September 30, 2005 and 2004 are:

2005		Total estimated range of loss	
	Accrued liabilities	Lower end of range	Upper end of range
Contingent liabilities:			
Probable	$ 2,208	$ 2,208	6,408
Reasonably possible		-	-
Environmental and disposal liabilities:			
Probable	82	82	112
Reasonably possible		-	-
Total contingent liabilities and environmental and disposal liabilities	$ 2,290	$ 2,290	6,520

2004		Total estimated range of loss	
	Accrued liabilities	Lower end of range	Upper end of range
Contingent liabilities:			
Probable	$ -	$ -	-
Reasonably possible		3,005	9,100
Environmental and disposal liabilities:			
Probable	1,097	1,097	1,097
Reasonably possible		-	-
Total contingent liabilities and environmental and disposal liabilities	$ 1,097	$ 4,102	10,197

Notes to the Financial Statements—As of September 30, 2005 and 2004 (in thousands) 123

Note 12 Leases and Occupancy Agreements

The USGS has many cancelable occupancy agreements with the General Services Administration (GSA), primarily for office space. Some of these agreements do not have a stated expiration. USGS also has many operating leases, primarily for storage and housing for employees working on location, with public entities. USGS has estimated its future minimum liability for GSA occupancy agreements by adding OMB approved inflationary rate increases per year to the FY2005 lease rental expense. Public operating leases were calculated based on lease agreement terms.

Future estimated minimum operating lease payments as of September 30, 2005, are in the following table.

	Real property		Personal property		
Fiscal Year	**Federal**	**Public**	**Federal**	**Public**	**Total**
2006	$ 64,309	2,185	-	5	$ 66,499
2007	59,735	1,999	-	-	61,734
2008	54,787	1,954	-	-	56,741
2009	38,660	1,787	-	-	40,447
2010	34,815	1,425	-	-	36,240
Thereafter	106,475	5,813	-	-	112,288
Total Future Operating Lease Payments	$ 358,781	15,163	-	5	$ 373,949

Rental expenses for occupancy agreements, operating leases, and exhibit hall space during FY2005 and FY2004 were approximately $86.2 and $75.4 million, respectively.

In some cases, USGS secures funds from GSA's building fund to finance improvements made to space where USGS is the tenant. Because these improvements are made to convert the existing structures into workable space tailored to USGS needs, USGS is required to repay GSA the cost of the improvements over the term of the occupancy agreement, which is incorporated into the total rent payments billed to USGS by GSA. The principal loan balance of approximately $19 and $21.2 million at September 30, 2005 and 2004, respectively, is recorded as a liability and the corresponding leasehold improvements are recorded in Property, Plant & Equipment, which are amortized over the period of the occupancy agreements.

In recent years, while the total USGS Facilities budget has remained relatively constant, USGS facilities costs have continued to increase, resulting in a shortfall. To control or reduce cost, the USGS has developed a Strategic Facilities Management plan to achieve its facilities program goal to provide quality space to further science programs while optimizing facilities location, distribution, and use. The plan includes a set of basic operation and maintenance principles, a set of planning and management principles, a set of management actions, and redefined business practices.

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Examples of some of USGS facilities are included below:

The Alaska Science Center— Biological Science Office provides biological information and research findings to resource managers, policymakers, and the public to support sound management of biological resources and ecosystems in Alaska.

The Earth Resources Observation Systems (EROS) Data Center is a data management, systems development, and research field center for the USGS National Mapping Division.

The Art Exhibit Hallway at the National Center in Reston is used to display arts and crafts from the community, as well as for outreach events where the USGS displays its products, services, research, and programs. These exhibits often include a display panel backdrop, computer with digital demonstrations, and publications.

The National Wildlife Health Center is a biomedical laboratory dedicated to assessing the impact of disease on wildlife and to identifying the role of various pathogens in contributing to wildlife losses.

The U.S. National Ice Core Laboratory is a facility for storing, curating, and studying ice cores recovered from the polar regions of the world. It provides scientists with the capability to conduct examinations and measurements on ice cores, and it preserves the integrity of these ice cores in a long-term repository for current and future investigations.

Note 13 Statements of Net Cost by Segment

Consistent with the FY2004 presentation, USGS's four responsibility segments within the Statement of Net Cost represent the major operating segments by which achievement of USGS's mission and goals are measured: Biology, Water, Geology, and Geography.

As discussed in the Performance Data and Analysis— Performance Plan Development section, DOI has four major GPRA goals as presented in the unified strategic plan for the Department as a whole. USGS activities correspond to all of the DOI GPRA goals (except providing recreation) and 6 of the DOI's 17 end outcome goals. These six end outcome goals represent the major programs presented within the Statement of Net Cost.

The following tables reflect USGS net cost by responsibility segment for the years ended September 30, 2005 and 2004, respectively.

The Department of Interior

United States Geological Survey

Consolidating Schedule of Net Cost

For the Years Ended September 30, 2005

(in thousands)

	2005					
	Geology	Water	Geography	Biology	Eliminations	Total
Improve Health of Watersheds and Landscapes						
Intragovernmental cost	$ -	-	-	28,852	(616)	$ 28,236
Public cost	-	-	-	84,026	-	84,026
Total cost	-	-	-	112,878	(616)	112,262
Intragovernmental earned revenue	-	-	-	29,729	(616)	29,113
Public earned revenue	-	-	-	5,194	-	5,194
Total earned revenue	-	-	-	34,923	(616)	34,307
Net Cost	-	-	-	77,955	-	77,955
Sustain Biological Communities						
Intragovernmental cost	-	-	-	30,946	(637)	30,309
Public cost	-	-	-	132,544	-	132,544
Total cost	-	-	-	163,490	(637)	162,853
Intragovernmental earned revenue	-	-	-	31,479	(637)	30,842
Public earned revenue	-	-	-	3,770	-	3,770
Total earned revenue	-	-	-	35,249	(637)	34,612
Net Cost	-	-	-	128,241	-	128,241
Manage or Influence Resources— Energy						
Intragovernmental cost	8,276	-	-	-	(156)	8,120
Public cost	21,054	-	-	-	-	21,054
Total cost	29,330	-	-	-	(156)	29,174
Intragovernmental earned revenue	1,764	-	-	-	(156)	1,608
Public earned revenue	86	-	-	-	-	86
Total earned revenue	1,850	-	-		(156)	1,694
Net Cost	27,480	-	-	-	-	27,480
Manage or Influence Resources— Non-Energy						
Intragovernmental cost	18,444	-	-	-	(394)	18,050
Public cost	49,659	-	-	-	-	49,659
Total cost	68,103	-	-		(394)	67,709
Intragovernmental earned revenue	3,738	-	-	-	(394)	3,344
Public earned revenue	732	-	-	-	-	732
Total earned revenue	4,470	-	-		(394)	4,076
Net Cost	63,633	-	-	-	-	63,633
Protect Lives, Resources, and Property						
Intragovernmental cost	22,857	-	-	-	(475)	22,382
Public cost	88,353	-	-	-	-	88,353
Total cost	111,210	-	-	-	(475)	110,735
Intragovernmental earned revenue	13,288	-	-	-	(475)	12,813
Public earned revenue	1,792	-	-	-	-	1,792
Total earned revenue	15,080	-	-	-	(475)	14,605
Net Cost	96,130	-	-	-	-	96,130
Advance Knowledge through Scientific Leadership						
Intragovernmental cost	34,082	185,195	37,934	12,233	(37,153)	232,291
Public cost	96,753	434,398	159,402	37,084	-	727,637
Total cost	130,835	619,593	197,336	49,317	(37,153)	959,928
Intragovernmental earned revenue	11,133	133,158	31,005	5,480	(37,153)	143,623
Public earned revenue	7,795	149,247	15,714	248	-	173,004
Total earned revenue	18,928	282,405	46,719	5,728	(37,153)	316,627
Net Cost	111,907	337,188	150,617	43,589	-	643,301
Total						
Intragovernmental cost	83,659	185,195	37,934	72,031	(39,431)	339,388
Public cost	255,819	434,398	159,402	253,654	-	1,103,273
Total cost	339,478	619,593	197,336	325,685	(39,431)	1,442,661
Intragovernmental earned revenue	29,923	133,158	31,005	66,688	(39,431)	221,343
Public earned revenue	10,405	149,247	15,714	9,212	-	184,578
Total earned revenue	40,328	282,405	46,719	75,900	(39,431)	405,921
Net Cost	$ 299,150	337,188	150,617	249,785	-	$ 1,036,740

The Department of Interior

United States Geological Survey

Consolidating Schedule of Net Cost

For the Years Ended September 30, 2004

(in thousands)

	2004					
	Geology	Water	Geography	Biology	Eliminations	Total
Improve Health of Watersheds and Landscapes						
Intragovernmental cost	$ -	-	-	34,400	(587)	$ 33,813
Public cost	-	-	-	89,414	-	89,414
Total cost	-	-	-	123,814	(587)	123,227
Intragovernmental earned revenue	-	-	-	36,873	(587)	36,286
Public earned revenue	-	-	-	6,693	-	6,693
Total earned revenue	-	-	-	43,566	(587)	42,979
Net Cost	-	-	-	80,248	-	80,248
Sustain Biological Communities						
Intragovernmental cost	-	-	-	21,275	(631)	20,644
Public cost	-	-	-	121,846	-	121,846
Total cost	-	-	-	143,121	(631)	142,490
Intragovernmental earned revenue	-	-	-	24,350	(631)	23,719
Public earned revenue	-	-	-	1,765	-	1,765
Total earned revenue	-	-	-	26,115	(631)	25,484
Net Cost	-	-	-	117,006	-	117,006
Manage or Influence Resources— Energy						
Intragovernmental cost	8,317	-	-	-	(138)	8,179
Public cost	20,465	-	-	-	-	20,465
Total cost	28,782	-	-	-	(138)	28,644
Intragovernmental earned revenue	1,748	-	-	-	(138)	1,610
Public earned revenue	83	-	-	-	-	83
Total earned revenue	1,831	-	-		(138)	1,693
Net Cost	26,951	-	-	-	-	26,951
Manage or Influence Resources— Non-Energy						
Intragovernmental cost	20,768	-	-	-	(354)	20,414
Public cost	45,371	-	-	-	-	45,371
Total cost	66,139	-	-		(354)	65,785
Intragovernmental earned revenue	3,998	-	-	-	(354)	3,644
Public earned revenue	558	-	-	-	-	558
Total earned revenue	4,556	-	-		(354)	4,202
Net Cost	61,583	-	-	-	-	61,583
Protect Lives, Resources, and Property						
Intragovernmental cost	18,066	-	-	-	(464)	17,602
Public cost	89,834	-	-	-	-	89,834
Total cost	107,900	-	-	-	(464)	107,436
Intragovernmental earned revenue	10,154	-	-	-	(464)	9,690
Public earned revenue	1,440	-	-	-	-	1,440
Total earned revenue	11,594	-	-	-	(464)	11,130
Net Cost	96,306	-	-	-	-	96,306
Advance Knowledge through Scientific Leadership						
Intragovernmental cost	36,215	180,282	47,249	7,856	(36,465)	235,137
Public cost	98,391	436,399	177,662	42,047	-	754,499
Total cost	134,606	616,681	224,911	49,903	(36,465)	989,636
Intragovernmental earned revenue	10,877	140,591	36,348	4,633	(36,465)	155,984
Public earned revenue	6,639	139,495	19,961	76	-	166,171
Total earned revenue	17,516	280,086	56,309	4,709	(36,465)	322,155
Net Cost	117,090	336,595	168,602	45,194	-	667,481
Total						
Intragovernmental cost	83,366	180,282	47,249	63,531	(38,639)	335,789
Public cost	254,061	436,399	177,662	253,307	-	1,121,429
Total cost	337,427	616,681	224,911	316,838	(38,639)	1,457,218
Intragovernmental earned revenue	26,777	140,591	36,348	65,856	(38,639)	230,933
Public earned revenue	8,720	139,495	19,961	8,534	-	176,710
Total earned revenue	35,497	280,086	56,309	74,390	(38,639)	407,643
Net Cost	$ 301,930	336,595	168,602	242,448	-	$ 1,049,575

Note 14 Budgetary Resources

The USGS receives budgetary resources from appropriations, offsetting receipts, and reimbursable activities. At September 30, 2005 and 2004, respectively, approximately $116.3 and $120.3 million of the budgetary resources were unobligated. These amounts include expired budget authority of $30.6 and $25.2 million at September 30, 2005 and 2004, respectively. The expired funds remain available for up to five years to pay expenses against obligations incurred. Recoveries of prior year obligations are comprised of canceled or downward adjustments of obligations incurred in prior years that were not subsequently disbursed.

Apportionment categories of obligations incurred. USGS obligations incurred during FY2005 and FY2004 were all category B and were subject to apportionment. Obligations incurred balances at September 30, 2005 and 2004 are:

		Apportioned, Category B	
Obligations incurred:		2005	2004
Direct	$	946,344	982,482
Reimbursable		475,505	441,467
Total obligations incurred	$	1,421,849	1,423,949

Permanent Indefinite Appropriations. Permanent indefinite appropriations refer to the appropriations that come from permanent public laws, which authorize USGS to retain certain receipts rather than a specific annually appropriated amount. These funds do not require annual appropriation action by Congress as they are subject to the authorities of the permanent law. USGS has three permanent indefinite appropriations. The majority of funding is from the "Surveys, Investigations, and Research" appropriation used to conduct operations in topography, geology, hydrology, biology, and mineral and water resources.

Appropriations Received. Appropriations received on the Consolidated Statements of Changes in Net Position differs from that reported on the Combined Statements of Budgetary Resources because appropriations received on the Combined Statements of Budgetary Resources does not include budgetary entries for funds in which USGS is the child to parent funds of other agencies.

Legal Arrangements Affecting Use of Unobligated Balances. Unobligated balances, whose period of availability has expired are not available to fund new obligations but are available to pay for adjustments to obligations incurred prior to expiration. For a no-year account, the unobligated balance is carried forward indefinitely until (1) specifically rescinded by law; or (2) the head of the agency concerned or the President determines that the purposes for which the appropriation was made have been carried out and disbursements have not been made against the appropriation for 2 consecutive years.

For a fixed appropriation account, the balance can be carried forward for 5 fiscal years after the period of availability ends. At the end of the 5th fiscal year, the account is closed and any remaining balance is canceled. Canceled authority is returned to the U.S. Treasury at the end of the 5th year of availability for annual and multi-year funds under Public Law 101-510. Resources permanently not available were adjusted pursuant to Public Law 114 Stat 2763A-214, SEC 1403.

Explanation of Differences between the Combined Statement of Budgetary Resources and the Budget of the United States Government. The Combined Statement of Budgetary Resources (SBR) has been prepared to coincide with the President's Budget (PB), the Budget of the United States Government). The FY2005 actual amounts as shown on the FY2007 President's Budget were not available at the time the financial statements were prepared. The FY2007 President's Budget is expected to be available in February 2006 and will be located at http://www.whitehouse.gov/omb.

128 Notes to the Financial Statements—As of September 30, 2005 and 2004 (in thousands)

USGS had differences that existed between the FY2004 Statement of Budgetary Resources and the FY2004 actual amounts reported in the President's FY2006 budget request. The differences relate to amounts included in the Statement of Budgetary Resources that are not reported in the President's Budget. These amounts include expired amounts and cancelled authority, working capital fund obligation balances, and offsetting collections.

		Amount per PB	Amount per SBR	Expected differences
Unobligated balance, beginning of fiscal year	$	110,000	155,481	45,481 (A)
Spending authority from offsetting collections		632,000	443,337	188,663 (B)
Unobligated balance not available		95,000	120,310	25,310 (A)
Obligated balance, net, end of fiscal year		92,000	103,752	11,752 (C)

(A) Amount of expired authority included in the SBR but not in the PB.

(B) Amount of collections included in the SBR but not in the PB.

(C) Amount of working capital fund obligations included in the SBR but not in the PB.

Note 15 Consolidated Statement of Financing Reconciling Items

There is a relationship between certain line items reported on the Consolidated Statement of Financing under "Total components of net cost of operations that will not require or generate resources in future periods" and the change in components of costs that are included in liabilities not covered by budgetary resources reported in Note 8.

The USGS is a recipient of allocation transfers of funds from the Bureau of Land Management, the Department of State, and the DOI Office of the Secretary.

The total components of net cost of operations related to transfer accounts where budgetary activity is reported by parent Federal entities that occurred during the years ended September 30, 2005 and 2004, respectively, consist of:

Appropriation	Trading Partner, Nature of Transfer		Reconciling Amount 2005	2004
14-19-4-1082.08	State Department:			
	American Section— International Commissions	$	-	58
14x5198.008	DOI Departmental Offices:			
	Natural Resource Damage Assessment & Restoration		1,408	1,089
14-14x1618.008	DOI Departmental Offices:			
	Natural Resource Damage Assessment & Restoration		87	99
		Total $	1,495	1,246

There is a relationship between certain line items reported on the Consolidated Statement of Financing under "Total components of net cost of operations that will require or generate resources in future periods" and the change in components of costs that are included in liabilities not covered by budgetary resources reported in Note 8.

Notes to the Financial Statements—As of September 30, 2005 and 2004 (in thousands) 129

Deferred credits, deposit fund liabilities, and other liabilities representing amounts payable to Treasury are reflected as not covered by budgetary resources in Note 8; however, they are not presented as a reconciling item on the Consolidated Statement of Financing.

The total components of net cost of operations related to changes in unfunded liabilities that occurred during the years ended September 30, 2005 and 2004, respectively, consist of:

	2005	2004	Increase/ (Decrease)
Annual leave liability	59,712	57,652	2,060
Environmental and disposal liabilities	82	1,097	(1,015)
Accrued payroll and benefits	2,889	2,297	592
Contract holdback liabilities	1,038	1,038	-
Contingent liabilities	2,208	-	2,208
Abandoned sites liabilities	21,459	20,971	488
GSA tenant improvement loans	19,051	21,216	(2,165)
FECA workers' compensation liability	7,330	7,941	(611)
FECA actuarial liability	41,010	40,569	441
Total change in selected unfunded liabilties	154,779	152,781	1,998
Less: Exchange revenue from the public	503	79	424
Total	$ 154,276	152,702	$ 1,574

	2004	2003	Increase/ (Decrease)
Annual leave liability	57,652	54,390	3,262
Environmental cleanup liabilities	1,097	507	590
Accrued payroll and benefits	2,297	4,161	(1,864)
Contract holdback liabilities	1,038	1,181	(143)
Contingent liabilities	-	-	-
Abandoned sites liabilities	20,971	20,638	333
GSA tenant improvement loans	21,216	26,051	(4,835)
FECA workers compensation liability	7,941	7,929	12
FECA actuarial liability	40,569	42,816	(2,247)
Total change in selected unfunded liabilties	152,781	157,672	(4,891)
Less: Exchange revenue from the public	79	930	851
Total	$ 152,702	156,742	$ (4,040)

130 Notes to the Financial Statements—As of September 30, 2005 and 2004 (in thousands)

Required Supplemental Information
(Unaudited; see Auditors' Report)

This part of the Section III *Financial Information* contains our required supplemental information disclosures.

Contents include:

Surveys, Investigations, and Research (Treasury Symbol 0804):

The United States Geological Survey (USGS) is primarily funded by the Surveys, Investigations, and Research (SIR) appropriation. The SIR appropriation is for expenses necessary for the USGS to perform surveys, investigations, and research covering topography, geology, hydrology, biology, and the mineral and water resources of the United States, its territories and possessions, and other areas authorized by law; classify lands as to their mineral and water resources; give engineering supervision to power permittees and Federal Energy Regulatory Commission licensees; and to conduct inquiries into the economic conditions affecting mining and materials processing industries and related purposes as authorized by law. [Department of the Interior and Related Agencies Appropriations Act, 2004]

The following activities are funded by the SIR appropriation: Mapping, Remote Sensing, and Geographic Investigations; Geologic Hazards, Resources, and Processes; Water Resources Investigations Activity; Biological Research; Enterprise Information; Science Support; and Facilities. Each activity is described below.

Geography

The Mapping, Remote Sensing, and Geographic Investigations activity continues efforts to improve the Nation's geospatial databases and their ascess, integration, and applications through implementation of the National Map, a network of integrated, high quality geospatial information covering all 50 States and commonwealths, and territories. Partnerships with other Federal, state, and local agencies, the private sector, and academia are the keystone for accomplishing this mission.

USGS programs provide scientific information to describe and interpret America's landscape by mapping the Nation's terrain, monitoring changes over time, and analyzing how and why these changes have occurred. The knowledge gained through these activities is used to model the changes occurring across the Nation's land and to forecast future changes.

The Mapping, Remote Sensing, and Geographic Investigations activity is broken down into three subactivities: Cooperative Topographic Mapping, Land Remote Sensing, and Geographic Analysis and Monitoring.

Geology

The Geologic Hazards, Resources, and Processes activity provides the Earth science information needs for a wide variety of partners and customers, including Federal, State, and local agencies, non-government organizations, industry, and academia. This information is used by the USGS and its partners, cooperators, and customers in evaluating resource potential, defining and mitigating risks associated with natural hazards, and characterizing the potential impact of natural geologic processes on human activity, the economy, and the environment.

USGS programs improve the safety of the United States from natural disasters and include efforts to (1) increase USGS ability to rapidly determine the location, size, and depth of large earthquakes, (2) discriminate kinds of earthquakes and geologic areas of the Pacific and Caribbean likely to cause tsunamis, (3) improve landslide models, assessments, and alert systems, (4) improve monitoring of the most dangerous volcanoes, and (5) work with Federal, local, and foreign partners to improve coordination, ensure timely warnings can be issued for all geologic hazards, and provide information so that informed community response plans can be developed and put in place.

The Geologic Hazards, Resources, and Processes activity supports three subactivities: Geologic Hazard Assessments, Geologic Landscape and Coastal Assessments, and Geologic Resource Assessments.

Water

The Water Resources Investigations activity funds work on issues related to water availability, water quality, and flood hazards. Over 4,000 scientific and support staff in offices located in every State support and/or perform work involving collection, management, and dissemination of hydrologic data; analysis of hydrologic systems through modeling or statistical methods; and research and development leading to new methods and new understanding.

USGS programs involve operating streamgages that measure the flow of rivers and provide data that are used in resource planning and dispute resolution, performs water-quality studies that have a strong connection to human health issues, and collects and provides data that enables citizens, communities, businesses, and local emergency-response agencies to make the best possible decisions about protecting lives and property in floods. The Water Resources Investigations activity supports three subactivies: Hydrologic Monitoring, Assessments, and Reseach, Cooperative Water Program, and the Water Resources Research Act Program.The Water Resources activity is funded in four subactivities: hydrologic monitoring, assessments and research, cooperative water program, and the Water Resources Research Act Program.

Biology

The Biological Research activity generates and distributes information needed in the conservation and management of the Nation's biological resources. Biological Research activities contribute to achieving improved management of the Nation's water resources, availability of maps and map data, and improved decisionmaking regarding land and water use.

USGS programs provide scientific information through research, inventory, and monitoring investigations, and increase the quantity of biological information available by improving access to and interactions with biological data. USGS biologists and information scientists, in partnership with many others, provide the scientific understanding and technologies necessary to support sound management and conservation of the Nation's biological resources. Biological studies develop new methods and techniques to identify, observe, and manage fish and wildlife, including invasive species, and their habitats; inventory populations of animals, plants, and their habitats; and monitor changes in abundance, distribtuion, and health of biological resources through time.

The Biological Research activity is broken down into three subactivities: Biological Research and Monitoring, Biological Information Management and Delivery, and Cooperative Research Units.

Support Services: Enterprise Information, Science Support, and Facilities

The Enterprise Information activity supports bureau-level activities and investments in the areas of information technology, information security, information management, information policy and standards, and information science. Enterprise Information is broken down into three subactivies: Enterprise Information Security and Technology, Enterprise Information Resources, and Federal Geographic Data Coordination.

The Science Support activity provides resources for the executive and managerial direction of the bureau and support services to all USGS scientific programs. Science Support is broken down into two subactivies: Bureau Operations and Payments to the National Business Center.

The Facilities activity provides workspace and facilities for accomplishing the bureau mission. The Facilities activity supports three subactivies: Rental Payments, Operations and Maintenance, and Deferred Maintenance and Capital Improvement.

Working Capital Fund (Treasury Symbol 4556):

The Working Capital Fund was established by law to provide USGS with the ability to finance a continuing cycle of operations in two components: Investments and Fee-for-Service. The Investment Component provides funding for Telecommunications, Equipment, Facilities, and Publications. The Fee-for-service component provides continuing funding for the National Water Quality Laboratory, the USGS Hydrologic Instrumentation Facility, Publications, bureau Laboratories, the National Training Center, Drilling, Landsat 7, and GSA Delegated Buildings.

Other Aggregated Accounts:

The USGS also receives a variety of other funding. Other appropriations include donations and contributions, reimbursables, miscellaneous receipts, natural resource damage assessment, and operations and maintenance of quarters.

The Department of Interior

United States Geological Survey

Combining Statement of Budgetary Resources

For the Year Ended September 30, 2005

(in thousands)

	2005			
	Fund 0804	Fund 4556	Other Budgetary Accounts	Total
Budgetary resources:				
Budget authority:				
Appropriations received	$ 958,021	-	2,353	$ 960,374
Net transfers, current year authority	5,437	-	-	5,437
Unobligated balance:				
Beginning of fiscal year	46,298	72,710	1,302	120,310
Spending authority from offsetting collections:				
Earned:				
Collected	411,119	53,688	-	464,807
Receivable from Federal sources	(7,334)	-	-	(7,334)
Change in unfilled customer orders:				
Advance received	3,601	-	-	3,601
Without advance from Federal sources	3,066	-	-	3,066
Subtotal: Spending authority from offsetting collections	410,452	53,688	-	464,140
Recoveries of prior year obligations	8,158	375	37	8,570
Permanently not available	(20,716)	-	-	(20,716)
Total budgetary resources	$ 1,407,650	126,773	3,692	$ 1,538,115
Status of budgetary resources:				
Obligations incurred:				
Direct	$ 943,813	-	2,531	$ 946,344
Reimbursable	410,973	64,532	-	475,505
Total obligations incurrred	1,354,786	64,532	2,531	1,421,849
Unobligated balance:				
Apportioned	22,242	62,241	1,161	85,644
Unobligated balance not available	30,622	-	-	30,622
Total status of budgetary resources	$ 1,407,650	126,773	3,692	$ 1,538,115
Relationship of obligations to outlays:				
Obligations incurred	$ 1,354,786	64,532	2,531	$ 1,421,849
Obligated balance, net, beginning of fiscal year	90,472	12,423	857	103,752
Obligated balance, net, end of fiscal year:				
Accounts receivable	135,460	-	-	135,460
Unfilled customer orders from Federal sources	45,780	-	-	45,780
Undelivered orders	(177,882)	(12,925)	(529)	(191,336)
Accounts payable	(100,388)	(5,220)	(211)	(105,819)
Total obligated balance, net, end of fiscal year	(97,030)	(18,145)	(740)	(115,915)
Less: Spending authority adjustments	(3,890)	(375)	(37)	(4,302)
Outlays:				
Disbursements	1,344,338	58,435	2,611	1,405,384
Collections	(414,719)	(53,690)	-	(468,409)
Net outlays before offsetting receipts	929,619	4,745	2,611	936,975
Less: Offsetting receipts	-	-	(2,353)	(2,353)
Net outlays	$ 929,619	4,745	258	$ 934,622

See accompanying Independent Auditors' Report in Section V of this Performance and Accountability Report.

The Department of Interior

United States Geological Survey

Combining Statement of Budgetary Resources

For the Year Ended September 30, 2004

(in thousands)

	2004			
	Fund 0804	Fund 4556	Other Budgetary Accounts	Total
Budgetary resources:				
Budget authority:				
Appropriations received	$ 949,686	-	1,695	$ 951,381
Unobligated balance:				
Beginning of fiscal year	78,629	74,704	2,148	155,481
Spending authority from offsetting collections:				
Earned:				
Collected	438,940	53,837	-	492,777
Receivable from Federal sources	(31,514)	-	-	(31,514)
Change in unfilled customer orders:				
Advance received	(1,165)	-	-	(1,165)
Without advance from Federal sources	(16,761)	-	-	(16,761)
Subtotal: Spending authority from offsetting collections	389,500	53,837	-	443,337
Recoveries of prior year obligations	10,744	384	63	11,191
Permanently not available	(17,131)	-	-	(17,131)
Total budgetary resources	$ 1,411,428	128,925	3,906	$ 1,544,259
Status of budgetary resources:				
Obligations incurred:				
Direct	$ 979,877	-	2,605	$ 982,482
Reimbursable	385,252	56,215	-	441,467
Total obligations incurrred	1,365,129	56,215	2,605	1,423,949
Unobligated balance:				
Apportioned	21,101	72,710	1,301	95,112
Unobligated balance not available	25,198	-	-	25,198
Total status of budgetary resources	$ 1,411,428	128,925	3,906	$ 1,544,259
Relationship of obligations to outlays:				
Obligations incurred	$ 1,365,130	56,215	2,604	$ 1,423,949
Obligated balance, net, beginning of fiscal year	26,311	9,325	1,592	37,228
Obligated balance, net, end of fiscal year:				
Accounts receivable	142,793	-	-	142,793
Unfilled customer orders from Federal sources	42,714	0	-	42,714
Undelivered orders	(162,251)	(7,383)	(524)	(170,158)
Accounts payable	(113,727)	(5,040)	(334)	(119,101)
Total obligated balance, net, end of fiscal year	(90,471)	(12,423)	(858)	(103,752)
Less: Spending authority adjustments	37,531	(384)	(63)	37,084
Outlays:				
Disbursements	1,338,501	52,733	3,275	1,394,509
Collections	(437,777)	(53,836)	-	(491,613)
Net outlays before offsetting receipts	900,724	(1,103)	3,275	902,896
Less: Offsetting receipts	-	-	(1,695)	(1,695)
Net outlays	$ 900,724	(1,103)	1,580	$ 901,201

See accompanying Independent Auditors' Report in Section V of this Performance and Accountability Report.

The Working Capital Fund (WCF) was established by Public Law (P.L.) 101-512 (November 5, 1990), as codified in 43 U.S.C. 50a. The fund was originally established to support the Washington Administrative Service Center (currently the National Business Center) and to support the replacement of the USGS mainframe computer, telecommunications equipment, and related Automated Data Processing equipment. Congress later expanded the existing Telecommunications Amortization Fund to establish the USGS Working Capital Fund by P.L. 103-332, dated September 30, 1994, which enabled USGS to use the WCF to fund laboratory modernization and equipment replacement; acquisition or development of software; facilities improvements; acquisition and replacement of computers, publications, scientific instrumentation, telecommunications, and other types of equipment replacement.

The two operating components of the WCF are fee-for-service operations and investments.

Fee-for-Service:

WCF fee-for-service components operate in a business-like manner, recovering fees for services performed based on a fee schedule established through a rate-setting process. WCF fee-for-service components must operate in compliance with OMB Circular A-25, User Charges, and recover the full cost of goods, services, and resources provided to customers. User charges should be based on market prices and create neither a shortage nor surplus of the goods or services. For each component fund, an annual budget and pricing schedule is required. User charges are required to be reviewed no less than biannually.

Fee-for-service component activities have been structured by use of seven funds, based on type of servicing activity: National Water Quality Laboratory, Hydrologic Instrumentation Facility, publications, research laboratories, National Training Center, drilling, and GSA delegated buildings.

Investments:

A key purpose of the WCF is to plan for long-term capital investments and accumulate the required funds over several fiscal years. The USGS is authorized to use the WCF to invest funds from appropriations and/or reimbursable agreements, without fiscal year limitations, for materials, supplies, telecommunications, and other equipment and facilities renovations in support of USGS programs and other agencies of the Federal Government. Normal operating expenses may not be funded through the WCF investment plans. All investments and expenditures from a WCF investment component must be documented in an approved, multi-year Investment Plan (IP). Investments must occur, at a minimum, in two fiscal years before acquisition can occur and are expected to be evenly balanced over the time period defined in the IP. Prior year contributions may not be withdrawn from the WCF under any circumstances; they must be expended from the WCF for an approved capital investment. Current year contributions may be withdrawn, subject to appropriate approvals, in rare instances.

Investment component activities have been structured by use of five funds, based on type of investment activity: telecommunications, equipment, facilities, publications, and Landsat 7.

The Working Capital Fund authority is a benefit allowed by Congress and the Office of Management and Budget, predicated on wise application to U.S. Geological Survey programs, exercised through prudent fiscal management. The fund provides a mechanism to assist USGS managers in planning for and acquiring goods and services that are too costly to acquire in a single fiscal year or that, due to the nature of services provided, must operate in a multiyear, as opposed to a single-year, basis of funding. In FY2005, we implemented a database tracking system to provide fiscal and program managers a sophisticated mechanism for monitoring fund plans, contributions, and expenditures, enabling managers to ensure the fund is used according to the guidelines established by Congress.

Michael A. Kelley, Budget Officer

The Department of Interior

United States Geological Survey

Working Capital Fund Balance Sheet

For the Years Ended September 30, 2005 and 2004

(in thousands)

	2005	2004
Assets		
Intragovernmental assets:		
Fund balance with Treasury	$ 80,386	$ 85,133
Total intragovernmental assets	80,386	85,133
Accounts and interest receivable, net	2	5
General property, plant, and equipment, net	9,382	8,234
Total assets	$ 89,770	$ 93,372
Liabilities		
Intragovernmental liabilities:		
Accounts payable	$ 870	$ 263
Other liabilities	114	98
Total intragovernmental liabilities	984	361
Accounts payable	3,691	4,225
Other liabilities	545	454
Total liabilities	5,220	5,040
Net position		
Cumulative results of operations	84,550	88,332
Total liabilities and net position	$ 89,770	$ 93,372

See accompanying Independent Auditors' Report in Section V of this Performance and Accountability Report.

The National Training Center (one of our fee-for-service components) is located on the 2nd floor of Building 53 on the Denver Federal Center. The training center provides quality customer service and a state-of-the-art bureau training facility with traditional and "virtual" classrooms that offer excellent learning opportunities for all USGS employees in every focus area, scientific, technical, administrative, leadership, management, etc.

The Department of Interior

United States Geological Survey

Working Capital Fund Schedule of Net Costs

For the Years Ended September 30, 2005 and 2004

(in thousands)

2005	Fee For Service	Investments	Total
Full cost of goods and services provided	$ 38,270	15,917	$ 54,187
Related exchange revenues	(40,784)	-	(40,784)
Excess of cost over revenues	$ (2,514)	15,917	$ 13,403

2004	Fee For Service	Investments	Total
Full cost of goods and services provided	$ 38,316	13,854	$ 52,170
Related exchange revenues	(38,451)	(107)	(38,558)
Excess of cost over revenues	$ (135)	13,747	$ 13,612

See accompanying Independent Auditors' Report in Section V of this Performance and Accountability Report.

In 1973, the USGS moved its National Headquarters to a new building in Reston, VA. The building, the John Wesley Powell Building, was formally dedicated on March 3, 1974, as the fifth National Center. Architects worked with USGS scientists on designing specialized space. The seven-story main tower is an eight-pointed star oriented to the main points of the compass.

"Executive Order 13327 establishes Government-wide requirements for real property asset management. In USGS, facilities costs are the largest single expenditure in the USGS budget after salary costs— an estimated $125 million in FY2005. Through asset management planning, we expect to control facilities costs while still meeting the unique facilities needs of a world-class science organization."

Keith Anderson, Chief, Office of Management Services

The Office of Management Services (OMS) at USGS provides for safe, functional, and high-quality workspace for accomplishing the bureau's science mission and ensuring that workspaces are maintained in compliance with applicable safety and other standards set by GSA and the Occupational Safety and Health Administration.

The USGS has key science facilities that are mission critical, including those that are fundamental to providing timely warnings of geologic hazards, as well as scientific understanding and technologies needed to support the sound management and conservation of the Nation's biological, energy, water, and mineral resources. The USGS is committed to improving the maintenance of existing facilities to ensure the health and safety of the public and employees, protection of cultural and natural resources, and compliance with building codes and standards.

USGS developed a "Five-Year Deferred Maintenance and Capital Improvement Plan" to provide necessary up-keep on property and equipment and to provide facilities that will best fulfill our mission. Deferred maintenance is work that was not performed when it was or should have been scheduled, often because of funding or priority ranking of work, and was thus delayed to a future period. Capital improvements include the construction of new facilities or the alteration of an existing facility to accommodate a change of function or unmet programmatic need. All capital improvement components of projects were excluded from the estimate in this report.

The Five-Year Plan is re-evaluated annually pursuant to the budget process and is subject to adjustments at that time depending on funding levels and revised priorities. Estimations on deferred maintenance are based on condition assessment surveys that are conducted every 5 years at each USGS site to determine the current condition of facilities and the estimated cost to correct deficiencies. These surveys are conducted by an independent architect/engineering firm and are supplemented by annual condition surveys performed by USGS personnel. These installation-wide, building specific assessments are the linchpin of the DOI program to establish core data on the condition of the Department's constructed assets.

The FY2007 budget formulation process was used to establish the base from which the FY2005 deferred maintenance priority listing was derived. OMS, which formulates the bureau's deferred maintenance budget, collected project proposals from regional and headquarters facilities projects for possible inclusion in the bureau plan for FY2006 – FY2010, which were then ranked to reflect the criticality of the health and safety deficiencies being addressed. A project that addressed a critical health and safety deferred maintenance need received a higher ranking than one addressing a critical mission deferred maintenance need. Teams of regional and headquarters facility and safety specialists reviewed the ranked proposals to confirm the accuracy of rankings and otherwise ensure the adequacy of the project proposals. Due to funding constraints, USGS addresses the most critical maintenance and capital improvement needs first.

A summary of the USGS deferred maintenance estimate at September 30, 2005, is reflected below. The amount of the total estimated as of September 30, 2005, is presented as the low estimate range and the high estimate range is based on the low estimate plus future funding requests of $1.5 million per year through 2029, including inflation.

(in thousands)

		Low	High
Buildings	$	29,249	35,911
Other Structures		8,891	10,916
Total		38,140	46,827

Required Supplemental Stewardship Information

(Unaudited; see Auditors' Report)

This part of the Section III *Financial Information* contains our required supplemental stewardship information disclosures.

Contents include:

The USGS serves the citizens of the United States as steward for a large, varied, and scientifically important body of heritage assets, and in conducting research and development that is critical to the health of our country and in understanding the Earth. Each year the USGS makes a substantial investment while fulfilling its stewardship responsibilities for the benefit of the Nation.

Costs associated with stewardship initiatives are treated as expenses in the financial statements in the year the costs are incurred. However, these investments in stewardship are intended to provide long-term benefits to the public and are included as required supplementary stewardship information (RSSI) reporting to highlight their long-term-benefit nature and to demonstrate our accountability over them. Stewardship resources are not required to be included in the assets reported in our financial statements; they are, however, important to understanding the operations and financial condition of USGS.

Stewardship assets often have physical properties that resemble those of the general property, plant, and equipment that is traditionally capitalized in the financial statements of Federal entities. However, due to the nature of these assets, valuation would be difficult and matching costs with specific periods would not be meaningful. Heritage assets have one or more of the following characteristics: historical or natural significance; special cultural, educational, or aesthetic value; or significant architectural characteristics.

USGS has heritage assets in two categories: museum collections and scientific library collections. The mission-related importance of these assets is described in the following pages.

Investments in research and development are expenses incurred to support the search for new or refined knowledge and ideas, the application or use of such knowledge and ideas, and the development of new or improved products or processes with the expectation of maintaining or increasing national economic productive capacity or yielding other future benefits.

Research and development activities are a vital part of work performed in accomplishing our mission.

USGS research and development activities encompass a wide range of studies that increase national economic capacity and yield other future benefits.

Making science fun is the first requirement when communicating science to youngsters. Science Camp, a partnership between the USGS and Reston Association, offers 8-to-12-year-old children an opportunity to meet scientists, participate in science experiments, learn and practice new computer skills, create a newspaper, take field trips, and participate in swimming, boating, crafts, and sports. Science Camp demonstrates the many exciting scientific activities in which the USGS is involved. Meeting real scientists and specialists working at the USGS is a vital part of our camp program, providing opportunities for children to think about pursuing a career in science.

The USGS manages a widespread collection of natural history specimens and cultural objects that support the mission of the bureau in many science and administrative centers throughout the United States. These unique collections serve to illustrate important achievements and challenges to the Earth Sciences, to document the history of the USGS, and to enlighten those who use the collections. The collections also provide the public with an interpretive demonstration of the history and enterprise of the USGS. The museum collections are divided into two major categories: historical (including art, history, ethnography, and documents), and zoology.

Historical collections:

USGS manages hundreds of historical objects that are loaned to other institutions for exhibits and placed on exhibit in the USGS National Center in Reston, VA, hallways or lobbies in regional offices, and science centers around the country. These collections are evidence of the resources, events, and people associated with USGS activities, and are studied by historians and scientists alike.

Geologist Levi Noble's hat

Our collection includes many special objects related to the cultural history of USGS, including a hat (pictured above) worn by geologist Levi Noble while attending the 3rd Pan-Pacific Science Congress held in Tokyo, Japan, in 1927; oil paintings of many historical figures; a 1930 Model A Ford (pictured below) used to successfully map the geology of California deserts through the 1960s; and the Lunar Rover used in the southwestern deserts to train astronauts in the lunar landing program through the 1970s. USGS had previously loaned the lunar rover to NASA to conduct space suit ergonomic studies, fuel-cell power system studies, and vehicle operational capability studies in advance of NASA's planned Mars exploration.

1930 Model A Ford used to map the deserts of California

Other interesting objects in the collection include John Wesley Powell's commission, one of the few documents signed by President James A. Garfield, appointing Powell as the second director of the USGS; an oak arm chair (pictured upper right) used by John Wesley Powell in his office when he served as USGS director from 1881 to 1894; geologic field mapping equipment from Arnold Hague's late 19th Century expedition to map Yellowstone National Park; a field desk (pictured lower right) used in the American West shortly after the turn of the century; and Director Thomas Nolan's field equipment and academic robe from St. Andrew's University in Scotland.

John Wesley Powell's chair

Field desk used shortly after the turn of the century

Zoology Collections:

Our zoology objects, which represent over 39,000 natural specimens, are housed at the Biological Research Arid Lands Field Station of the Fort Collins Science Center. These zoological specimens were collected to document the status of the environment on our public lands. A USGS wildlife research biologist and USGS zoology museum specialist stationed at the University of New Mexico's Museum of Southwestern Biology maintain this collection under a joint agreement between the USGS and the University of New Mexico at Albuquerque.

Sextant of finches from 1850

Of primary importance in our collection is the unique natural history collection of vertebrates that were used in support of food habit studies by researchers at the Department of Agriculture's Food Habits Laboratory in Denver, CO. Transferred to Fort Collins in the mid-1970s and then to the University of New Mexico in the 1990s, this collection (pictured below) includes over 8,000 fluid-preserved specimens of amphibians and reptiles, as well as mammal and avian skeletons and skins. Specimens have continued to be acquired as a result of the research emphasis to document mammal species from public lands in the West.

Fluid-preserved amphibian and reptile specimans storage

Condition Evaluations:

Cataloging efforts have also been a priority within USGS, as 100 percent of our museum collections have been catalogued. During the cataloging process, USGS evaluates the condition of each collection object. "Good" is considered to show little or no sign of aging or wear; "fair" applies to objects that are showing signs of deterioration such as faded color of fabric or wood, and "poor" objects that have missing parts or are extremely worn. Additions to the collection in the current year were donated. No deferred maintenance is necessary for our museum collections.

USGS personnel evaluating the condition of natural specimans

Total objects in collections	Condition Assessments		
	Good	**Fair**	**Poor**
40,136	40,004	114	18

USGS also evaluates the condition of the locations housing the collections in accordance with Departmental guidelines. The evaluation is based on a lengthy list of conditions. We have objects housed in two non-storage facilities, which were both evaluated as good using the Department's definitions. We also have objects housed in two storage facilities in which the collection's environmental conditions are monitored by hydrothermographs.

In response to two recent Executive Orders regarding preserving America and Federal assets management, USGS will be placing additional emphasis during FY2006 on identifying whether or not the buildings and structures owned by USGS are considered to be of historical significance. If necessary, USGS will evaluate whether or not the properties identified as historic would be eligible for placement on the National Register of Historic Places.

Museum Collections at a Glance:

Our museum collections are housed in both Federal and non-Federal institutions in an effort to maximize accessibility to the public.

During both FY2004 and FY2005, USGS maintained four collections in bureau facilities and two collections in non-Federal facilities. Although there were additions of objects to the existing collections, there were no new collections added during FY2005. There were also no disposals of collections during FY2005.

Public Information:

The public has been granted access to view these collections through a new Web site (www.usgs.gov/aboutusgs/who_we_are/museum) and can visit USGS facilities to see them on exhibit. During FY2005, USGS responded to dozens of requests for information on our museum collections. The most unusual request received resulted in an image from the collection being reproduced on the cover of a book printed in Japanese regarding the geology of Japan.

USGS library holdings, collected during more than a century of providing library services, are an invaluable legacy to the Nation. Congress established the library in the 1879 legislation that founded the USGS. The Act decreed that copies of reports published by the USGS should be given to the library to exchange for publications of State and national geological surveys and societies. The USGS Library built from this notable and cost-effective exchange program, plus purchases and gifts, has become the world's largest collection of earth science information. The library was originally located in Washington, D.C.; however, the library collection is now housed in four libraries across the country in Reston, VA, Menlo Park, CA, Denver, CO, and Flagstaff, AZ.

The reception desk at the National Center Library in Reston, Virginia.

In addition to the annual purchases of serials, maps and books, the library has built its collection through exchange. Since its beginning, the library has administered a major program of international and domestic exchange of earth science publications authorized by the legislation that established USGS. The exchange program, with national and foreign geological surveys and research organizations, has enabled the library to collect materials published in small numbers, never widely distributed, and never reprinted.

While responding to the current and anticipated subject interests of USGS researchers, such as those in ecology, geology, hydrology, health, and biology, the library maintains its heritage collection of core science publications dating back to the 17th century, providing a unique historical record of the progress of natural science. Besides providing resources for scientific investigations, the library's multi-disciplinary collection provides access to geographical, technical, and historical literature in paper and electronic formats for the general public and industry.

Library users bring their questions to the library daily, in person or by phone or email, and expert librarians assist them in using the wealth of well-organized information to find answers.

During a century of collecting, the library has acquired many treasures such as the George F. Kunz collection. George F. Kunz was a former employee of the USGS, a vice-president of Tiffany & Co., and one of the world's preeminent gem experts at the time of his death in 1932. The Kunz collection includes rare books on gemology, the lapidary arts, the folklore of gemstones through history, and archival gem trade records, including the original provenance of the Hope diamond.

Another unusual acquisition was the group of books and maps known as the Heringen collection. These military geology texts and maps were looted by the Nazis from European libraries, including Russia, and hidden in a potash mine in Heringen, Heese, Germany. At the end of World War II they were transported by the U.S. military to the United States and are now part of the USGS library.

The map collections include an archival and working collection of USGS topographical maps, plus thematic and topographical maps of the United States and the World. These maps have provided invaluable aid to authorities and scientists in times of disasters and military interventions. Maps, photographs, and literature in the USGS library have provided evidence to solve boundary disputes and water rights litigation, to

Map collections at the National Center Library in Reston, VA.

Geologist Marcia Garcia at work in the library.

trace geographic names, and to research natural and man-made changes in an area over time.

Our Field Records collection in Denver includes items such as field notes, field maps and sketches, and project-related correspondence created or collected by USGS scientists during official project work. The Photographic Archive provides the public with access to over 19,000 photographs and original sketches dating from 1868 to the present. Additionally, USGS maintains a collection of over 500,000 photographs taken during geologic studies of the U.S. and its territories dating from 1868 to present. Some photographs have been used to illustrate publications, but most have never been published.

The Library supports the research of the DOI and other government agencies, universities, and professional communities. Libraries throughout the world, including the largest and most renowned, borrow from our library's unique collection. The USGS library has loaned scientific publications and objects to thousands of libraries in every State and in over 37 foreign countries that were public, State, Federal, nonprofit, company, and academic libraries. Although not defined by Congress as a national library, the library is recognized as the premier national collection of geologic and hydrologic publications, supplementing the Nation's large library collections in major universities and government agencies.

Condition Evaluations:

Careful consideration is given to assessing the condition of each item in the library collections. A category of "good" is defined as materials protected for reasonable use which includes publications bound or with sturdy covers, maps loosely shelved in drawers without crowding or in archival grade envelopes with minimal folds, photographs mounted in archival quality albums, or materials protected by archival quality paper or plastic sleeves or boxes. Materials evaluated as "fair" are those which can be circulated, but require binding or further treatment to ensure long-term protection. "Poor" materials are those that cannot be circulated or used without special attention until preservation repairs are made. This includes publications with old brittle or mottled paper, loose pages, loose or thin covers, tears, water-damage or other damage, improper binding with tight covers, flaking binding covers, loose photographs, nitrate or glass photograph negatives, and multimedia and digital disks without containers. No deferred maintenance is necessary for our library collections.

(in thousands)

	Condition Assessments		
USGS Library Items	**Good**	**Fair**	**Poor**
National Center Library	80%	15%	5%
Denver Branch Library	65%	20%	15%
Flagstaff Branch Library	80%	15%	5%
Menlo Park Branch Library	70%	20%	10%

Library Collections at a Glance:

During both FY2004 and FY2005, USGS maintained library collections at four Federal facilities. Although there were additions of objects to the existing collections, there were no new library locations/collections added during FY2005. There were also no disposals of library locations/collections during FY2005.

The USGS library system (four libraries) contains over 1.2 million books and over 1.8 million non-book items, including maps, photographs, pamphlets, field record notebooks, digital media, and other collectible items, for a total of over 3 million items.

Materials are acquired from extensive exchange agreements with institutions and agencies worldwide, from research projects and purchases from a wide variety of publishers and institutions. Items are withdrawn only after the professional library staff has made a critical analysis of the collection.

The USGS is the earth and natural science research bureau of the Department and the only integrated natural science bureau in the Federal government. By combining biology, geology, hydrology, and geography in one agency, the USGS is uniquely positioned to provide science information and conduct scientific research that ensures an integrated approach to advance scientific knowledge and utilize the latest technologies to provide timely answers and products, and improve the quality of life for the communities we serve. USGS research and data products support the Department's resource and land management needs and provide the science information needed by other Federal, State, tribal, and local government agencies to guide planning, management, and regulatory programs.

The USGS reviews Research and Development (R&D) investments and weighs the value of existing programs against changing needs and priorities. The Director prioritizes new initiatives on the basis of the following criteria: interdisciplinary science; collaboration and partnerships with Department bureaus, other government agencies, and universities (**relevance**, first of OMB's three R&D investment criteria); results of program evaluations; and demonstration of progress toward meeting the Department's **performance** (second of three OMB R&D criteria) goals and objectives. The Director then selects from among the prioritized initiatives those that can accommodate within the funding target. The Capital Planning and Investment Control process provides support for decisions on technology necessary to support science and the business processes of the bureau.

Peer review has been the **quality** (third OMB R&D criteria) standard for USGS scientific publications and a documented component of USGS policy throughout our 126-year history. Our programs are cyclically evaluated to ensure the quality and timeliness of our science. The evaluations not only improve the accountability and quality of programs, but also identify and address gaps in programs; redirect or reaffirm program directions; identify and provide guidance for development of new programs; and review and (or) motivate managers and scientists. All of USGS programs evaluated by OMB's PART process have received a "moderately effective" rating or better. These evaluations are the foundation on which USGS gauges performance relative to the Department End Outcome measure for soundness of methodology, accuracy, and reliability of science.

In accordance with OMB Circular No. A-11, USGS research activities are classified as basic, applied, or developmental research. A definition of each of the categories is below.

Basic – defines activities as systematic studies directed toward fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications toward processes or products in mind.

Applied – defines activities as systematic studies to gain knowledge or understanding necessary for determining the means by which a recognized and specific need may be met.

Developmental – defines activities as systematic application of knowledge or understanding, directed toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements.

Our science is being used more and more in decisionmaking, and this is essential to our success in demonstrating relevance. That doesn't mean that all of what we do needs to be applied; as former Director Walter C. Mendenhall said, "There can be no applied science unless there is science to apply."

Summary Information:

Total research and development investments were $809 and $883 million during FY2005 and FY2004, respectively.

A summary table reflecting R&D stewardship investments by GPRA goal is presented at right. Following the summary table are examples of how our research and development activities demonstrate results that are consistent with their intended purpose, and highlights from each science discipline's FY2005 research and development activities describing the research program.

Additional outputs and outcomes demonstrating results that are consistent with the intended research program purpose beyond the examples provided are presented in Section II: Performance Data and Analysis – Performance Measure Results.

(in millions)

DOI Goals and R&D Type		2001	2002	2003	2004	2005
Resource Protection						
Improve health of watersheds and landscapes	$					
Basic research						10
Applied research						71
Developmental research						6
Sustain biological communities						
Basic research						13
Applied research						115
Developmental research						8
Resource Use						
Manage or influence resources — Energy						
Basic research		Data not available by GPRA end outcome goals. USGS implemented a new strategic plan during FY2004, measuring performance under these end outcome goals.				5
Applied research						19
Developmental research						-
Manage or influence resources — Non-Energy						
Basic research						10
Applied research						44
Developmental research						1
Serving Communities						
Protect lives, resources, and property						
Basic research						4
Applied research						45
Developmental research						20
Advance knowledge through scientific leadership						
Basic research						37
Applied research						364
Developmental research						37
Total research and development						
Basic research		63	82	77	71	79
Applied research		567	799	681	740	658
Developmental research		53	83	101	72	72
Total	$	683	964	859	883	809

The following example demonstrates the relationship of USGS development and applied research in Alaska, the most seismically active State in the Nation. Today, Alaskans have a better network of seismic stations and an improved ability to monitor earthquake activity as a result of USGS partnerships with the State, the University of Alaska Fairbanks Geophysical Institute, and the city of Anchorage.

Seismology lab, University of Alaska, Fairbanks, Geophysical Institute.

In March 2004, as part of the commemoration of the anniversary of the 1964 magnitude-9.2 Good Friday earthquake in Anchorage (Prince William Sound), USGS and partners installed a 32-channel strong-motion instrument array in the Atwood Building, one of the tallest structures in Alaska, and installed instrument packages in six nearby boreholes in the ground. The borehole sensors and the instrumentation in the building will determine how the ground and the building respond to future earthquake shaking, information essential for engineers to mitigate property damage and loss of life. This was a critical first step in making the cities and the people in Alaska safer from the devastating effects of earthquakes. This enhanced seismic network is now allowing USGS and its partners to implement ShakeMap in the City of Anchorage. This tool will provide first responders with the information they need to assess the intensity and distribution of strong ground shaking in the critical minutes following an earthquake. The USGS scientist that developed ShakeMap—a rapidly generated computer map that shows the location, severity, and extent of strong ground shaking within minutes of an earthquake—earned the prestigious Legacy Award for his work. He not only developed the methodology behind ShakeMap, but also coordinated implementation of the system in emergency response centers across the western United States.

USGS efforts in restoring the Everglades is an outstanding example of basic research with science applications that address issues resulting from nearly a century of wetland drainage and impoundment and that provide the information needed to restore the health of this unique ecosystem. The USGS provides the primary science support to the Department for resource management and restoration in South Florida. These and other studies are providing the highest quality scientific research and scientific information so that our partners at Interior and State and local agencies can fulfill their resource management and technical responsibilities.

Mapping, Remote Sensing, and Geographic Investigations

The Mapping, Remote Sensing, and Geographic Investigations Activity transitioned into two unique activities, the National Geospatial Programs Office and Geographic Research. This move strengthens geographic research and consolidates geospatial activities.

The **Geographic Research Program** comprises the Land Remote Sensing (LRS) program, Geographic Analysis and Monitoring (GAM) program, and Science Impact program focused on providing scientific information to describe and interpret America's landscape by mapping the Nation's terrain, monitoring changes over time, and analyzing how and why these changes have occurred. The knowledge gained through these activities is used to model the changes occurring across the Nation's land and to forecast future changes.

These two photographs of Miami, taken in 1912 and 1997, exemplify how dramatically urban expansion can alter the landscape, ecosystems, and human environment over time.

Under the National Geospatial Programs Office, the **Cooperative Topographic Mapping (CTM) program** continues the efforts to improve the Nation's geospatial databases and their access, integration, and applications through implementation of *The National Map*, a network of integrated, high-quality geospatial information covering all 50 States and Commonwealths, Territories, and Freely Associated States. Partnerships with other Federal, State, and local agencies, the private sector, and academia are the keystone for accomplishing this mission.

Implementation of *The National Map* within the CTM program focused on providing geospatial data and information using current technologies. The major goals of the program are to: (1) improve the value of the geospatial data available to natural resources decisionmakers and the public by building *The National Map* through partnerships with Federal, State, and local governments that collect and maintain higher-resolution, more current data; (2) ensure the availability, currentness, and archive of nationally consistent and integrated geospatial data across the country; and (3) lead the development and promote the use of international, national, and Federal Geographic Data Committee National Spatial Data Infrastructure standards among *The National Map* partners.

Most of the eight critical data themes (orthoimagery, elevation, hydrography, land cover, transportation, man-made structures, boundaries, and geographic names) are now available. Prototypes for the rest are being implemented. Geospatial data models and applications are being built from the higher-resolution data sets. Availability of *The National Map* allows USGS science programs and those of other Federal agencies to concentrate on producing information unique to their mission needs and to avoid expending resources to duplicate, develop, and integrate basic spatial data each time they are needed. The primary focus of this activity is developmental research, but applied research is also conducted.

The **Land Remote Sensing (LRS) program** acquires, archives, disseminates, and promotes the application of remotely sensed data of the Earth's land surface. The program operates the Earth-observing satellites (Landsats 5 and 7) and acquires additional data through a multi-mission ground station. The research and development (R&D) activities in this program focus on the applied research and development of the scientific application of remotely sensed data. For example the USGS provides remotely sensed data products for use in fire applications. USGS scientists are working with fire specialists and managers from five national parks (Yosemite, Glacier, Great Basin, Lassen Volcanic, and Theodore Roosevelt) to enhance methods of remotely mapping characteristics of forest, shrub, and grassland fuels. Landsat satellite imagery supplemented with Airborne Visible and InfraRed Imaging Spectrometer hyperspectral data are being used to develop methods for determining the condition of fuels and how they change over time. In addition, the program is ensuring that alternative data sources and evolving technologies are evaluated and utilized to their maximum potential to meet our Nation's land-remote-sensing requirements, such as the Landsat Data Continuity Mission.

The **Geographic Analysis and Monitoring (GAM) program** provides the analyses and applications needed to address natural and human-induced changes on the landscape. The program encompasses three fundamental science issues concerning changes to the Earth's surface: (1) understanding changes that are occurring on the land surface and why; (2) understanding the positive and negative impacts of these land-surface changes on ecosystem health, climate variability, biogeochemical cycles, hydrology, and human health; and (3) using the best methods available to incorporate scientific findings in the decisionmaking process of natural resource managers and provide information to the public.

Activities conducted in this program include producing a series of status and trends reports documenting a national assessment of land surface change, global-change research, ecosystems research, and land-cover applications. The program mainly conducts applied research as it assesses the Nation's land resources at a range of spatial and temporal scales to understand the rates, causes, and consequences of landscape change over time. Long-term studies of land use and disturbance histories are underway, determining the reasons for change, leading to improved understanding and knowledge about landscape processes.

The **Science Impact program**, part of GAM activities, is a cross-discipline effort to increase the use and value of USGS science in informing decisionmaking at

Interior and other Federal, State, and local agencies, and by citizens. The effort encompasses developing, testing, evaluating, and applying improved methods and processes to enhance linkages between science and decisionmaking. The program conducts both basic and applied research in developing systematic applications to increase the use and value of science within decisionmaking.

Together, these programs directly support the President's Management Agenda and priorities of the Secretary of the Interior for: (1) science-based decisionmaking, by making available to scientists and the public accurate and reliable base geospatial data and information produced through partnerships with organizations in every sector, and (2) electronic government, by simplifying and enhancing the delivery of geospatial data, information, and tools to citizens. They also support the DOI Serving Communities strategic goals of advancing knowledge through scientific leadership and informing decisions through the application of science.

Geologic Hazards, Resources and Processes

Geologic Hazards Assessment — The USGS geologic hazards programs conduct research, gather long-term data, operate monitoring networks, perform assessments and modeling, and disseminate findings to the public, enabling the Nation's emergency response capabilities to warn of impending disasters, better define risk associated with natural hazards, encourage appropriate response, and mitigate damage and loss. These programs are designed to produce information and understanding that will lead to a reduced impact of natural hazards and disasters on human life and the economy.

The United States is subject to a variety of natural hazards (earthquakes, floods, hurricanes (coastal erosion), landslides, tsunamis, volcanoes, and wildland fires) that can result in considerable human suffering and billions of dollars in property and business losses. The occurrence of these hazardous events is inevitable and uncontrollable. However, the extent of damage and loss of life can be reduced through preventative planning; social, economic, and engineering adaptations; provision of real-time warning capabilities; and more effective post event emergency response.

Central to this pre-planning is the availability of accurate, scientifically based geologic hazards assessments and real-time warning systems that define the nature and degree of risk or potential damage. The more precisely risks can be defined, the greater the likelihood that appropriate mitigation strategies will be adopted (e.g., building codes for new construction and retrofitting; land-use plans; and design and location/routing of critical infrastructure such as highways, bridges, subways, water, sewer, gas, electric, local zoning regulations, and petroleum-distribution networks). The sooner information reaches emergency response centers, the sooner teams can be dispatched to resolve time sensitive medical, utility, or other infrastructure problems. These programs support DOI's Serving Communities strategic goal to protect lives, resources, and property, which is aimed at making information available to communities to use in developing hazard mitigation, preparedness, and avoidance plans. The primary focus of this subactivity is applied research, but also conducts basic and developmental research.

Geologic Landscape and Coastal Assessments — These programs focus on understanding geologic processes at or near the Earth's surface through basic and applied research, monitoring, and assessment of the landscape. Information and modeling derived from these geologic process studies allow scientists to distinguish the effects of human activities from natural changes and enable more effective, adaptive, and efficient resource and environmental management decisions. These programs support DOI's Serving Communities strategic goals of advancing knowledge through scientific leadership and informed decisions through the applications of science, which is aimed at improving the information base, information management, and technical assistance. The primary focus of this subactivity is applied research, but also to conduct basic and developmental research.

Geologic Resources Assessment — USGS geologic resources programs assess the availability and quality of the Nation's mineral and energy resources, including the economic and environmental effects of resource extraction and use. The availability and cost (both economic and environmental) of energy and mineral resources and their extraction and use are limiting factors to human development.

Throughout its history, the Nation has faced important, and often controversial, decisions regarding the competing uses of Federal lands, the environmental consequences of resource development, and the supply of energy and mineral resources to sustain development and enable growth. Federal land-management agencies are required to develop plans that reconcile competing demands for resource development with other human activities while recognizing environmental values and providing for the sustainability of resources and natural environments.

These two programs support DOI's Resource Use strategic goal to manage or influence resource use to enhance public benefit, promote responsible use, and ensure optimal-value energy and non-energy minerals, which is aimed at ensuring data are available for managers to make informed decisions about use of resources. The primary focus of this subactivity is applied research, but basic research is also conducted.

Water Resources Investigations

Hydrologic Monitoring, Assessments, and Research — The USGS has the principal responsibility within the Federal government to provide the hydrologic information and understanding needed by others to achieve the best use and management of the Nation's water resources. To accomplish this mission, Water Resources Investigations, in cooperation with State, local, and other Federal agencies: (1) systematically collects and analyzes data to evaluate the quantity, quality, and use of the Nation's water resources; (2) conducts water-resources appraisals describing the occurrence, availability, and physical, chemical, and biological characteristics of surface water and ground water; and (3) conducts basic and problem-oriented research that aids in alleviating water resources problems and provides an understanding of hydrologic systems sufficient to predict their response to natural or human-caused stress.

The **Cooperative Water Program** provides reliable, impartial, and timely information needed to understand the Nation's water resources through shared efforts and funding with State, tribal, and local partners. With states and localities paying at least half the cost of the work that the USGS performs, the Cooperative Program funds about 65 percent of USGS streamgaging activities, as well as a variety of focused water resource investigations in collaboration with State and local water management agencies and Tribal organizations, with the goal of seeking solutions to water-resource issues of national concern.

USGS administers grants for 54 State Water Resources Research Institutes designated by the Water Resources Research Act. The program supports academic research to aid in the resolution of State and regional water problems and related land problems, promotes technology transfer, and provides for the training of scientists and engineers.

These programs support DOI's Serving Communities strategic goals of advancing knowledge through scientific leadership and informing decisions through the application of science. The primary focus of these programs is applied research.

Biological Research

Research and Monitoring — The USGS serves the biological research needs of DOI bureaus and others by providing scientific information through research, inventory, and monitoring investigations. Biological studies develop new methods and techniques to identify, observe, and manage fish and wildlife, including invasive species, and their habitats; inventory populations of animals, plants, and their habitats; and monitor changes in abundance, distribution, and health of biological resources through time.

DOI land and resource managers use USGS biological science to maintain the health, diversity, and ecological balances of biological resources while meeting public needs, such as game harvests and the use of public lands and waters, all of which enable the managers to address the DOI strategic goals of improving the health of watersheds, landscapes, and marine resources and of sustaining biological communities. This subactivity supports the DOI's Resource Protection strategic goal by providing the natural resource management community with scientific information to improve the health of watersheds and landscapes. This subactivity also supports the DOI's Resource Protection strategic goal by providing the natural resource management community with scientific information to implement sound resource management to sustain biological communities on DOI lands and influenced land and waters. The primary focus of this subactivity is applied research, but basic and developmental research are also conducted.

Information Management and Delivery — Science-based decisionmaking is a DOI priority, particularly as it pertains to the conservation, management, and use of the Nation's natural resources. To facilitate this, the USGS is committed to making available the data and information that are critical to scientific discovery and application. Data sets, maps, and other information on products are vital to achieve this goal. This subactivity supports DOI's Serving Communities strategic goals of advancing knowledge through scientific leadership and informed decisions through the applications of science by increasing the quantity of biological information available by improving access to and interactions with biological data. The primary focus of this subactivity is applied research, but basic research is also conducted.

Cooperative Research Units — This cooperative program allows government and nongovernmental entities with common interests and responsibilities for natural resource management to address biological resources issues. Through this unique program, biologists from Federal and State governments and academia are able to work as a team and focus their expertise and creativity on the resolution of biological resources issues. This subactivity supports the DOI's Resource Protection strategic goal of sustaining biological communities on DOI-managed and influenced lands and waters by providing the natural-resource management community with scientific information and trained personnel to implement sound resource management to sustain biological communities on DOI lands and influenced lands and waters. The primary focus of this subactivity is applied research, but basic and developmental research are also conducted.

Enterprise Information

Federal Geographic Data Coordination — The Federal Geographic Data Coordination subactivity provides for operational support and overall executive management for the Federal Geographic Data Committee (FGDC). This leadership role is specified as a DOI responsibility under OMB Circular A–16.

The FGDC is an interagency and intergovernmental committee that encourages Federal, State, Tribal, and local governments, academia, the private sector, and nonprofit organizations to work together within a geographic area to make geospatial data available to all through the National Spatial Data Infrastructure (NSDI), Geospatial One Stop (GOS), and The National Map. The GOS is a focused set of collaborative activities designed to accelerate the development and advance the use of the NSDI as a fundamental building block for Electronic Government. The Department serves as the managing partner of the GOS E-Government Quicksilver Project. The USGS provides the operational support and overall executive management for the GOS project on behalf of the Department.

FGDC participates actively in related international activities including the Global Spatial Data Infrastructure, Group on Earth Observation (GEO) comprised of the United Nations and European Commission members, and in the development of a 10-year implementation plan for the Global Earth Observation System of Systems (GEOSS). New partnerships with National Geospatial-Intelligence Agency and the Department of Homeland Security will be implemented to support national security requirements. This programs support DOI's Serving Communities strategic goal of advancing knowledge through scientific leadership and informed decisions through the application of science. Developmental research is the primary focus of this program.

Appendices

USGS scientist retrieves portable seismic recorders, which had recorded seismicity of explosive charges as well as earthquakes, following an eruption of the Redoubt Volcano in Alaska.

Contents

ABC/M	Activity-Based Costing/Management
ANSS	Advances National Seismic System
APA	American Planning Association
APS	Administrative Policy and Services
A/R	Accounts Receivable
BASIS+	Budget and Science Information System
BFC	Big File Cabinet
BOR	U.S. Bureau of Reclamation
BLM	U.S. Bureau of Land Management
BRD	Biological Resources Division
CA	Condition Assessment
CAP	Cooperative Agreements Program
CBP	Chesapeake Bay Program
CERP	Comprehensive Everglades Restoration Plan
CINDI	Center for Integration of Natural Disaster Information
CISN	California Integrated Seismic Network
CMGP	Coastal and Marine Geology Program
COTS	Commercial Off-the-Shelf
CPIC	Capital Asset Planning and Investment Control
CREW	Cascadia Regional Earthquake Workgroup
CSRS	Civil Service Retirement System
CTM	Cooperative Topographic Mapping
DCIA	Debt Collection Improvement Act
DOD	Department of Defense
DOI	U.S. Department of the Interior
DSS	Decision Support System
EFT	Electronic Funds Transfer
EHP	Earthquake Hazards Program
EPA	U.S. Environmental Protection Agency
EPCA	Energy Policy and Conservation Act
EROS	Earth Resources Observation and Science
ERP	Energy Resources Program
ESN	Enterprise Services Network
ETM+	Enhanced Thematic Mapper Plus
FAIR	Federal Activities Inventory Reform
FASAB	Federal Accounting Standards Advisory Board
FBMS	Financial Business Management System
FBWT	Fund Balance with Treasury
FCI	Facilities Condition Index
FECA	Federal Employee Compensation Act
FEGLI	Federal Employees Group Life Insurance
FEHB	Federal Employees Health Benefit
FEMA	Federal Emergency Management Agency
FERS	Federal Employees Retirement System
FFMIA	Federal Financial Management Improvement Act of 1996
FGDC	Federal Geographic Data Committee
FICA	Federal Insurance Contributions Act
FISC	Florida Integrated Science Center
FISMA	Federal Information Security Management Act
FMFIA	Federal Managers' Financial Integrity Act of 1982
FMMS	Facilities Maintenance Management System
FWS	U.S. Fish and Wildlife Service
GAAP	Generally Accepted Accounting Principles
GAM	Geographic Analysis and Monitoring Program
GAO	Government Accountability Office
GCP	Global Change Program
GIO	Geospatial Information Office
GIS	Geographic Information System
GOS	Geospatial One Stop
GPRA	Government Performance and Results Act
GPS	Global Positioning System
GSA	General Services Administration
GSN	Global Seismographic Network
HHS	Health and Human Services
IP	Investment Plan
IRIS	Incorporated Research Institutions for Seismology
InSAR	Interferometric Synthetic Aperture Radar
JWP	John W. Powell
KSAs	Knowledge, Skills, and Abilities
IT	Information Technology
LiDAR	Light Detecting and Ranging
LHP	Landslide Hazard Program

LMV	Lower Mississippi Valley
LRS	Land Remote Sensing
LTRMP	Long-Term Resource Monitoring Program
MD&A	Management's Discussion and Analysis
MRERP	Mineral Resources External Research Program
MRP	Mineral Resources Program
NASA	National Aeronautics and Space Administration
NAWQA	National Water Quality Assessment
NBC	Dept. of Interior - National Business Center
NBII	National Biological Information Infrastructure
NCGMP	National Cooperative Geologic Mapping Program
NEHP	National Earthquake Hazards Program
NGIC	National Geomagnetic Information Center
NOAA	National Oceanic and Atmospheric Administration
NPS	U.S. National Park Service
NRC	National Research Council
NSDI	National Spatial Data Infrastructure
NSF	National Science Foundation
NSIP	National Streamgage Information Program
NWIS	National Water Information System
NWQL	National Water Quality Laboratory
NWS	National Weather Service
OAFM	USGS Office of Accounting and Financial Management
OBP	USGS Office of Budget and Performance
OIG	Office of the Inspector General
OMB	Office of Management and Budget
OMS	Office of Management Services
OPM	Office of Personnel Management
PART	Program Assessment Rating Tool
PGV	Peak Ground Velocity
PMA	President's Management Agenda
PP&E	Property, Plant, and Equipment
PTWC	Pacific Tsunami Warning Center
R&D	Research and Development
REX	Regional Executive
RLA	Resource Lands Assessment
RSSI	Required Supplementary Stewardship Information
RTS	Reports Tracking System (Water Resources)
SAFOD	San Andreas Fault Observatory at Depth
SAIN	Southern Appalachian Information Node
SCEC	Southern California Earthquake Center
SETAC	Society of Environmental Toxicology and Chemistry
SFMP	Strategic Facilities Master Plan
SFWMD	South Florida Water Management District
SLC	Scan Line Corrector
SGL	Standard General Ledger
SIR	Surveys, Investigations, and Research
SPRESO	South Pole Remote Earth Science Observatory
SRTM	Shuttle Radar Topographic Mission
STEP	Short-Term Earthquake Probability
TCUs	Tribal Colleges and Universities
TES	Threatened and Endangered Species
TLSA	Teshekpuk Lake Special Area
TNM	The National Map
TRIP	The Road Indicator Project
TROR	Treasury Report on Receivables
TRPA	Tahoe Regional Planning Agency
TSP	Thrift Savings Plan
USCOE	U.S. Army Corp. of Engineers
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USGCRP	U.S. Global Change Research Program
USGS	U.S. Geological Survey
VHP	Volcano Hazards Program
V&V	Validation and Verification
WAN	Wide Area Network
WCF	Working Capital Fund
WNV	West Nile Virus
WRD	Water Resources Division
WPA	World Petroleum Assessment 2000
WRIR	Water Resources Investigation Report

Brian Atwater Recognized Among the World's 100 Most Influential People

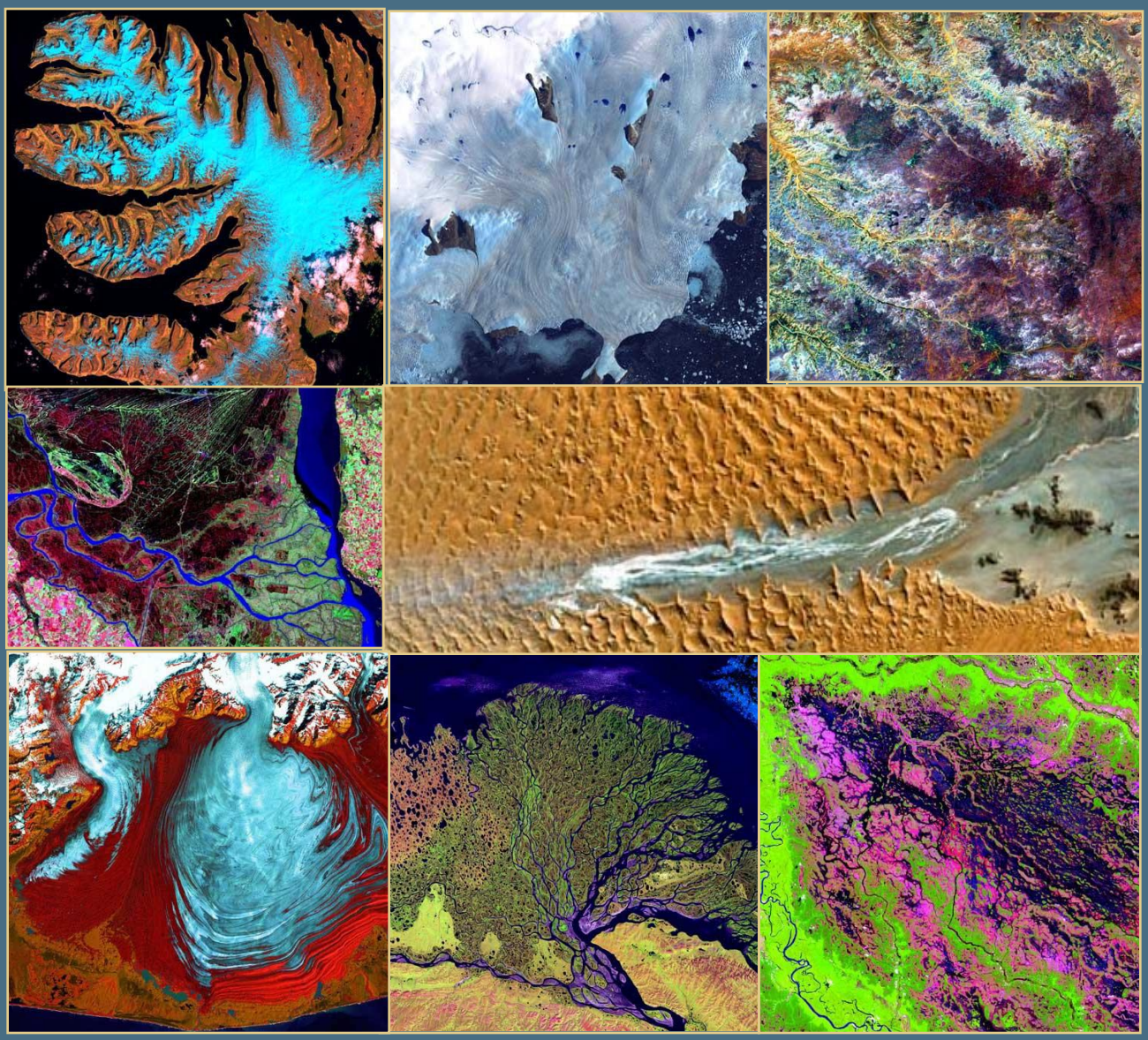
On April 18, 2005, TIME Magazine released a special issue with the cover title *The TIME 100: The lives and ideas of the world's most influential people* (below). USGS scientist Dr. Brian Atwater is featured in the category of "Scientists and Thinkers."

Atwater earned his place on the list from a seemingly humble place, a well-used aluminum canoe. The TIME article describes how Atwater paddled around the salt marshes and tidal flats of Washington State, discovering devastating evidence of past tsunamis. For nearly 20 years Atwater's paleoseismic investigations of great Cascadia megathrust earthquakes throughout the 600-mile-long Cascadia Subduction Zone (that was once thought by some to be relatively harmless) have helped to convince other scientists and the general public of the fact that very large megaearthquakes do indeed occur in Cascadia, and that these earthquakes can be accompanied by large, damaging tsunamis. Atwater helped demonstrate that the fault line is capable of producing powerful earthquakes and tsunamis that can not only infiltrate and change the landscape in Washington, but can also travel across the ocean, inflicting widespread damage to distant shorelines.

Atwater's work in the world's subduction zones combined with a strong personal desire to explain how scientists weave together pieces of geologic evidence made Atwater a natural spokesperson following the devastating December 26, 2004, Indonesian earthquake.

Satellite Images from the USGS Earth as Art Collection — Left to right, clockwise:

West Fjords (Iceland), Greenland Coast, Ghadamis River (Libya), Namib Desert (Namibia), Demini River (Brazil), Lena Delta (Russia), Malaspina Glacier (Alaska), and Parana River Delta (Argentina).



We Welcome Your Comments!

Thank you for your interest in the U.S. Geological Survey's FY2005 Performance and Accountability Report. We welcome your comments on how we can make this report a more informative document for our readers. We are particularly interested in your comments on the usefulness of the information and the manner in which it is presented. Please send your comments to:

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